

Forty-three samples of medicinal distilled liquors were examined, of which six answered to the tests given in the pharmacopœia and dispensatory, and thirty-seven were inferior. These distilled liquors were all purchased at drug-stores, and the dealer was presumed to know that they were intended for medicinal use. The price paid varied from the rate of four dollars to twenty dollars a gallon, yet this was not indicative of the quality.

The pharmacopœia defines brandy to be "an alcoholic liquid obtained by the distillation of fermented grapes, and at least four years old." It shall contain from 36 to 47 per cent, by weight, of alcohol, shall not contain any fusel-oil, nor shall the residue obtained by evaporation exceed 0.25 per cent. There should be no evidence that sugar or glycerine has been added, and it should contain a slight amount of tannin derived from the casks. None of the samples answered to these tests, and there was no proof that the article was of the proper age.

The difficulty of obtaining pure brandy of a proper age for medicinal use is very great. This is especially true of the imported article; while that made in California is, as a rule, of inferior quality, and not sufficiently aged and bland to be used in cases of illness. The following statement, made in the "United States Consular Reports," November, 1887, p. 333, is interesting in this connection:—

"The term 'brandy' seems to be no longer applied to a spirit produced by the fermentation of grapes, but to a complex mixture, the alcohol of which is derived from grain, potatoes, or, worst of all, the refuse of the beet-root refineries. It would seem to be fairly impossible at present to purchase a pure cognac. As each individual proprietor of a vineyard has become a distiller and compounder, he has acquired the art of imitating any special flavor or vintage of brandy that may be called for. Potato spirits and beet alcohols, the most deleterious and obnoxious of all the varieties of spirits, are sent from Germany into France in vast quantities. They are flavored, colored, and branded or labelled to meet the wishes of American connoisseurs. The mere fact of coming out of bond, or 'straight through the custom-house,' is generally accepted here as sufficient evidence that they are pure and genuine. It is rather unfortunate that physicians themselves frequently strengthen this hallucination in favor of imported spirits by giving the most stringent orders to their patients to procure genuine French cognac, even though it may command tenfold the price of an absolutely pure spirit of domestic production. This imperative command becomes a cruel injustice in the case of poor patients. Under the best of circumstances, what is there to be gained by the use of French brandy in preference to pure domestic spirit?"

And, it may be added to this statement, if alcoholic stimulants are to be prescribed by the physician, let him first ascertain the source of the sample, and acquaint himself with the quality, origin, and ingredients. The alcoholic strength in the samples analyzed varied from 37 to 47 per cent of alcohol by weight. Of the 15 samples of whiskey examined, 3 were equal to the requirements of the pharmacopœia. That authority defines this spirit as follows: "An alcoholic liquid, obtained by the distillation of fermented grain, generally corn, wheat, or rye, and at least two years old." Its alcoholic strength should be between 44 and 50 per cent by weight. It should contain no fusel-oil, not more than 0.25 per cent of residue on evaporation, and traces of tannin from the casks. The object sought by this description is to insure a properly made and aged liquor, and one without irritant or acrid properties.

The same objections to the use of impure or badly made whiskey obtain as were mentioned above, and physicians should not prescribe for use in cases of sickness a stimulant that fails to meet the pharmacopœial tests. The alcoholic strength of the samples examined varied from 34 to 48 per cent of alcohol by weight.

Of 42 samples of laudanum examined, only 8 were up to the standard. Dr. Newton's investigation revealed many important facts concerning the prevalence of the opium habit, and he was surprised to learn the amount of this potent drug, and its tincture, that is sold at country grocery-stores; but that the consumption of this article is great, and increasing, was no surprise when he ascertained how easily the article could be obtained, notwithstanding the State law that bottles containing the tincture should be

labelled, and not disposed of to irresponsible persons. He suggests that some action be taken that will check the sale of opium and its preparations to irresponsible persons, or without an order from a physician.

The report contains, in addition, an exhaustive inquiry into the baking-powders used in the State, which we shall notice at another time, and a list of decisions by the Supreme Court on the oleo-margarine law.

Residents of New Jersey may congratulate themselves on having so capable and watchful an officer as Dr. Newton at the head of this important department, and we regret that the same congratulations cannot be extended to the residents of many other States in the Union.

GOULD'S ORNITHOLOGICAL WORKS.

MESSRS. HENRY SOTHERAN & CO., of London and Manchester, having purchased from the executors of the late naturalist, Mr. John Gould, F.R.S., F.Z.S., the whole stock, lithographic drawings, copyright interests, etc., of his various works on natural history, announce the completion of this grand series of ornithological works by the publication of the twenty-fifth part of "The Birds of New Guinea and the Adjacent Papuan Islands." This series, comprising forty-three volumes, uniformly printed in imperial folio size, is now offered complete for one thousand pounds net.

A short biographical sketch of Mr. Gould appeared in *Nature* some time ago, from which it appears that John Gould was born at Lyme, in Dorsetshire, in 1804, and in early life passed several years under the care of the late Mr. J. T. Aiton, of the Royal Gardens at Windsor. In the year 1827 he went to London, and became taxidermist to the Zoological Society's museum, where he had the good fortune to obtain the intimate friendship of Mr. N. A. Vigors, then one of the leading English naturalists; and through him John Gould received his first opportunity of appearing as an author. So rare were Himalayan birds in those days, that a small collection was thought worthy of description by Mr. Vigors in the "Proceedings of the Zoological Society," and the figuring of these specimens was commenced by Mr. Gould under the title of "A Century of Birds from the Himalayan Mountains." By this time, however, an event had taken place which had an influence on the whole of his later life; viz., his marriage with Miss Coxen, the daughter of Mr. Nicholas Coxen of Kent. Besides her other accomplishments, Mrs. Gould was an admirable draughtswoman, and from her husband's sketches she transferred to stone the figures of the above-named work. Its success was so great that in 1832 the "Birds of Europe" was commenced, and finished in five large folio volumes in 1837; while simultaneously, in 1834, he issued "A Monograph of the Rhamphastidæ, or Family of Toucans," and, in 1838, "A Monograph of the Trogonidæ, or Family of Trogons." To the last he maintained his love for these birds, and one of his most recently finished works was a second edition of the last-mentioned monograph. It is a curious fact, that, when John Gould proposed to publish his first work, he applied to several of the leading firms in London, and not one of them would undertake to bring it out; so that it was only with reluctance that he began to issue the work on his own account. Besides these larger publications, he had described the birds collected during the voyage of the "Beagle" by his friend Mr. Darwin, and had contributed papers on other subjects to the Zoological Society's publications.

We now come to what is considered the most striking incident in Mr. Gould's life, — one unsurpassed in its effects in the annals of ornithology. Beyond a few scattered descriptions by some of the older authors, and an account of the Australian birds in the museum of the Linnæan Society by Messrs. Vigors and Horsfield, the birds of Australasia were very little known at the date mentioned. Accompanied, therefore, by his devoted wife, Mr. Gould proceeded in 1838 to study Australian birds in their own home; and he personally explored Tasmania, the islands in Bass's Straits, South Australia, and New South Wales, travelling four hundred miles into the interior of the latter country. This voyage, specially undertaken for the purpose of obtaining an exact knowledge of Australian birds, must ever be reckoned as a distinct scientific achievement; and the accounts of the habits of some of the more

remarkable species, such as the mound-building megapodes and the bower-birds, were quite triumphs in the way of field ornithology. Nests and eggs were collected, as well as an excellent series of skins, both of mammals and birds; and here Mr. Gould's beautiful method of preparation was especially noticeable. Some of his specimens, skinned more than thirty years ago, are as neat in appearance, and as fresh, as the day they were prepared. Returning in 1840, after two years' absence, he commenced the great work on the "Birds of Australia," which makes seven folio volumes, and occupied seven years in its production, being completed in 1848. One of the features of this work is the great increase in our knowledge of the range and habits of petrels and other sea-birds, to which the author paid great attention during his travels, and is by far the most important, from an ornithological point of view, of all Gould's works.

Within a year of Mr. Gould's return from his adventurous voyage, he had the misfortune to lose his wife, and for some time he was completely overwhelmed by his bereavement. His collectors in Australia too, about the same period, lost their lives. One of them, Mr. Gilbert, was killed during Dr. Leichhardt's expedition overland from Moreton Bay to Port Essington; and Mr. Drummond, while collecting in western Australia, was also murdered by natives; and a third collector was killed by the explosion of a gun on one of the islands of Bass's Straits. It speaks volumes, however, for the zeal and energy with which Mr. Gould had prosecuted his researches in the Australian continent, that very few birds (sufficient only to form a supplement in a single folio volume) have been discovered since he left the field of his labors in that quarter of the globe.

Another landmark in the career of this great ornithologist was the publication of his "Monograph of the Trochilidæ, or Family of Humming-Birds." These lovely little birds had been for a long time favorites with Mr. Gould, who gradually began to amass that fine collection which has been the admiration of naturalists for so many years. Taking advantage of the great exhibition of 1851, he obtained permission from the Zoölogical Society to erect, at his own cost, a large building in their gardens in the Regent's Park, where the collection was open to the public at a charge of sixpence per head. A considerable sum was realized by this exhibition, and a large number of subscribers to his monograph were obtained, including nearly all the royal families of Europe. Though sketched by Mr. Gould himself (for even to the last days of his life he executed the designs for all his plates), the majority of the humming-birds were placed on stone by Mr. Richter, who also did the same for Mr. Gould's next work, the "Birds of Asia." This work, though not completed at the time of his death, aged seventy-six, on Feb. 3, 1881, was brought to a satisfactory conclusion by Mr. R. Bowdler Sharpe, F.L.S., F.Z.S., etc., of the British Museum, acting on behalf of Messrs. H. Sotheran & Co., who have since brought his other unfinished works to completion, as hereafter mentioned. It is most valuable on account of the number of plates of species not figured elsewhere. The "Mammals of Australia," produced simultaneously with the last-mentioned work, deserved, in Mr. Gould's own opinion, more credit for its issue than perhaps any work he had done, because it touched upon a branch of zoölogy of which he never pretended to have any very exact knowledge. So large, however, had been his collections of *Mammalia* during his sojourn in Australia, that some account of them seemed to be demanded, and he therefore published his large folio work; but the pecuniary results were less satisfactory than with any of his ornithological productions. His typical specimens of the Australian *Mammalia* are in the national collection. No sooner were the humming-birds finished than his active brain conceived a new idea, to illustrate becomingly the birds of his native land, and he commenced the publication of the "Birds of Great Britain." Opinions may differ as to the merit of Mr. Gould's other works; volumes less ponderous than the folios which he adopted for the better figuring of the objects of the natural size may take their place with the student; but no work of greater beauty will be produced than that on which John Gould, returning in his later life to his first love, bestowed the fulness of his energy and the acme of his artistic talent. The care bestowed on the plates of this work was remarkable, the aim of the author being to produce a picture

of the birds as they appeared in their natural haunts; and especial pains were bestowed on the young, particularly those of the wading-birds and natatores. In this fine work most of the drawings were developed and placed on stone by Mr. W. Hart, who also executed all the plates of the later works.

In 1865, Mr. Gould republished his letterpress of the big work in an octavo form, under the title of "A Handbook to the Birds of Australia," but with all the additional species inserted in their proper families: these two volumes are therefore of great use to the student. After the completion of his work on "British Birds," Mr. Gould devoted himself to the continuation of the "Birds of Asia" and the supplement to the "Birds of Australia," until, in 1875, he commenced a work on the "Birds of New Guinea," which was to contain also descriptions of any new species that might be discovered in Australia or any part of the Australian region. Of the last-named work, eleven parts had appeared at his death, and it has since been completed by Mr. Bowdler Sharpe. The following works were also left unfinished: "A Monograph of the Pittidæ, or Ant-Thrushes of the Old World" (one part published); and the supplement to the "Monograph of the Humming-Birds," which has also been completed by Mr. Sharpe, with the co-operation of Mr. Osbert Salvin.

The above list enumerates all the works published by Mr. Gould, with the exception of the "Icones Avium" (issued about 1838, and containing supplementary plates to his previous volumes, with descriptions of new species), "A Monograph of the Odontophorinæ, or Partridges of America," "Synopsis of the Birds of Australia," and "A Monograph of the Macropodidæ" (published in 1841-42). In addition to the folio volumes, he was also in the habit of reprinting the introductions to his larger works in an octavo form for presentation to his friends.

BOOK-REVIEWS.

Hints for Teachers of Physiology. (Guides for Science-Teaching, No. XIV.) By H. P. BOWDITCH, M.D. Boston, Heath. 24°.

AT the present time physiology is taught in most of the grammar-schools; and the author has attempted to show how a teacher may supplement text-book instruction by means of simple observations and experiments on living bodies or on organic material, thus imparting to the pupils a knowledge of the foundation on which physiology rests, and at the same time bringing the impressions made on the senses to aid the memory in retaining the facts communicated in a purely didactic way. The reputation of Professor Bowditch as one of the foremost physiologists of America is a guaranty that the advice which he gives is based on scientific principles, and we heartily commend this manual to all teachers of physiology. Even those who are giving instruction to students more advanced than those in grammar-schools will find here many useful hints and suggestions.

The Leading Facts of French History. By D. H. MONTGOMERY. Boston, Ginn. 12°. \$1.25.

THIS work is intended for the use of schools, and is well adapted to its purpose. It treats, as its name implies, of the leading facts only, very few passages being filled with detail; and the story is in the main well told. The author's style is simple and easily understood, and the book is divided into sections with suitable headings for the student's use. Its principal defect is that it is almost exclusively a political history; the general progress of civilization, and the more special histories of literature, science, philosophy, and art, being almost wholly neglected. Mr. Montgomery puts on his titlepage the remark of Guizot, that "there is hardly any great idea, hardly any great principle of civilization, which has not had to pass through France in order to be disseminated;" but, owing to the scanty information furnished about the progress of civilization, this remark receives but slight illustration from this work.

The political history itself, however, is well treated, the really important topics being put in the foreground, while battles and court intrigues are relegated to their proper place. The earliest periods of French history are of course passed over somewhat lightly, but as much is said about them as most students will care for, and particular care is taken to show how the kingdom grew