made an examination of ten thousand samples of plankton relative to growth, reproduction and movements of planktonic organisms. This investigation goes to show that temperature and salinity are a great factor in the rise and fall of planktonic life. Since 1910 the mackerel catches on the Atlantic coast have declined to an alarming extent.

Some of the English scientists have advanced the idea that the mackerel are leaving America and migrating to the European coast. If this is a fact and taking into consideration that mackerel are plankton feeders the solution seems to be centered around the study of planktonic organisms.

The investigation of the seasonal distribution of plankton in the Woods Hole region by Dr. Charles J. Fish, Bureau of Fisheries, will in all probability pave the way towards surveying the Atlantic coast.

No doubt the tagging of mackerel will show appreciable results. But unfortunately many uncontrollable factors enter into the above experiments, such as hyperglycemia due to handling the fish and being exposed to the air, thus causing them to fall easy prey to their enemies after being returned to the water.

RALPH C. JACKSON

U. S. BUREAU OF FISHERIES,
WOODS HOLE, MASS.

ABSTRACTING OLD BOTANICAL WORKS AND MANUSCRIPTS

THE value of a complete abstract journal can not be overestimated; we all recognize the great importance of periodicals, such as *Botanical Abstracts, Botanisches Centralblatt, Chemical Abstracts* and a number of similar papers in other fields of learning.

These publications, however, are of relatively recent origin. For example, Just's *Botanische Jahresbericht* was founded by Just in 1873. *Botanisches Centralblatt* was started in 1880. Previous to this time a wealth of important work had been published: some of it can be found in a number of well-known serials. Some of them are still being published, but the earlier issues are not easily obtainable, except in some of the large institutions of the Old and New World. We need mention only Curtis's *Botanical Magazine* (1786), *Botanische Zeitung* (1843), *Linnaea* (1826), *La Belgique Horticole* (1851), Transactions and Proceedings of the Botanical Society of Edinburgh (1843), Transactions of the Royal Society (1663), *Flore des Serres et des Jardins de l'Europe* (1845) and a number of others.

I have spent considerable time in a number of libraries like those of the British Museum, of Kew Gardens, of the University of Amsterdam, of the University of Berlin and others, studying works on plants and on their economical aspects published in earlier centuries. One is surprised by the fine talent of these observers and workers of times long past, men who were heretofore unknown to us. From the sixteenth until the beginning of the last century men like Malpighi, Grew, Swammerdam, van Leeuwenhoek, Camerarius, Linné, Koelreuter or Sprengel have given us an indelible impression of their achievements, but there are others whose work has been forgotten, and no one can estimate the advantage it will be to science and history to have their work revived. If we consider only the work of an investigator of later date, namely, that of Gregor Mendel, one will realize the importance of this task of abstracting.

There are international catalogues besides those of libraries which will facilitate this work considerably. Also publications like Seguier's "Bibliotheca Botanica," 1740; Wikström's "Litteraturae Botanica in Suecia," 1831; Krüger's "Bibliographia Botanica," 1841, and treatises on the history of botany during certain periods which will contribute very much toward making the task of finding originals easier.

In many libraries there are unknown manuscripts, which are not published and probably never will be published, but which are of enormous value. They may contain views or observations which were not ripe for these days, and therefore were not fully comprehended by the learned world of that time. A systematic search, a perseverance and last but not least a love for one's profession will ensure the completion of this work, which will not only be of great historical value but also to science itself.

J. C. TH. UPHOF

ORLANDO, FLORIDA

SCIENTIFIC BOOKS

Entwicklung und Bibliographie der Pathologisch-Anatomischen Abbildung. BY EDGAR GOLDSCHMID. Leipsig, Karl W. Hiersemann, 1925, 301 pp., 44 pl. 4°. Price 150 marks.

THIS is the first serious attempt to grapple with a theme of some moment to medicine, namely, the history of pathology. Pathology, as a generic term, connotes and comprises everything relating to the essential nature of disease. In ordinary usage, however, it denotes the changes in structure and function produced by disease and thus includes both the "anatomical idea" of Virchow and what Allbutt styled "altered physiology," *i.e.*, the facial appearance and physical habitus of different diseases, as well as in paralytic deformities and other derangements of function. The

plates in the present volume cover changes in the external configuration of the face and body (semeiology) as well as pathological changes in structures beneath the skin. It is plain that this phase of the history of pathology is largely the history of its delineation by skilled artists. The author, a Frankfurt professor and prosecutor in the Senckenburg Pathological Institute, has therefore followed the ground-plan of Choulant's famous "History of Anatomical Illustration" (1852). If his adherence to the Choulant tradition seems a bit too formal at whiles, it is to be remembered that his model is one of the greater classics of medicine, a work of infallible accuracy, representing a lifetime of patient research. His book begins with a sketch of the history of pathological illustration, including the technical processes of reproduction. This is followed by a brief bibliography of source-books, after which the author launches bravely into a complete reasoned bibliography of books containing pathological pictures, arranged in five chronological periods. There follow valuable and accurate indices of authors, artists, publishers and books (under authors' names), a subject-index of the diseases and parts of the body illustrated in the different atlases and an index of the forty-four plates, twenty-eight of which are handsomely colored.

The prehistory of the subject comprises accidental figuration of pathological formations on antique vases, stelae, papyri, frescoes, old MSS., primitive pottery, ex voto tablets and the like. Between this phase and the period of conscious or intentional illustration of pathology come the chance figurations on fugitive sheets, in non-medical books, oil paintings, sculpture of the post-antique period and so on. Examples of the early phases, as presented in the plates, are a votive tablet from Athens representing varicose veins, a bit of Huaco sculpture showing facial paralysis, terra-cotta figurations of the facies of disease from Asia Minor, Albert Durer's colored print of syphilis, Ghirlandajo's rhinophyma and a painting of Simon Vouët's, showing suppurative osteomyelitis. The first period of illustration with didactic intention begins with the start made in first-class anatomical illustration by Leonardo da Vinci and Vesalius and goes down to the time of the great surgeon-anatomists of the 18th century (1517-1733). It is the period of wood- and copper-plate engraving and etching, illustrated in the volume by cuts from Bonetus (1686), Valentini (1715) and Heister (1715). The second period, from Cheselden to Soemmering (1733-92), is the period of the surgeon anatomists who produced great atlases in copper and steel-engraving. The third period, from Sandifort to Cruveilhier (1793-1829), marks the rapid victory of colored lithography over colored copper-plates, splendidly exemplified in the pathological reports of Richard Bright (1827-31). The fourth period (1830-60) finds its high spots in the atlases of Cruveilhier (1829-42), Carswell (1838), Lebert (pathological histology, 1845), Danielssen and Boeck on leprosy (1848), Auvert (1851), in the work of the dermatologists and in Virchow's *Archiv* (1847-1925). The fifth period runs from 1860 to the recent developments of chromolithography, photography and the low-priced hand-atlases. The colored plates illustrating these periods are of superlative excellence, particularly those from Cruveilhier, Lebert, Auvert and the dermatological atlases of Alibert (1817-28), Bateman (1830) and Rayer (1839). One misses, it is true, the Venus of Willendorf, the earliest known bit of prehistoric sculpture (showing the endocrine phase of obesity), the achondroplasic dwarf figurines of Egypt, collected by Charcot, the pathological plates of Richard Bright (1827), Corrigan's superb engraving of aortic insufficiency (1832), the facies of Addison's disease (1855) and the wonderful iconography of nervous diseases made under the inspiration and guidance of Charcot. The *Nouvelle Iconographie de la Salpétrière* is, in fact, treated with scant courtesy. Our author does not seem to realize that it consists of twenty-eight stout volumes (1888-1918) containing the most valuable illustrations of the pathology and semeiology of nervous diseases in existence. These pictures show not only the facies and habitus in typical cases, but, in accordance with Charcot's teaching, carefully selected atypical or incipient cases, so that a person with a tendency to acromegaly or exophthalmic goiter might be recognized (say) in a street-car. The excellent *Revue photographique des hôpitaux de Paris* (1869-72) is also omitted. These, however, are slips which it will be easy to correct in a subsequent edition. The book is obviously a *vade mecum* for all medical librarians and will find its way into the collections of professional pathologists who care for their subject. The format is, if anything, too massive and sumptuous. A later edition in smaller size, and with a more definite choice of pictures, would be a valuable acquisition for the active practitioner and surgeon.

F. H. GARRISON

ARMY MEDICAL LIBRARY,
WASHINGTON, D. C.

NOTES

THE State Board of Fisheries and Game of Connecticut has just issued "A report of investigations concerning shad in the rivers of Connecticut," by P. N. Mitchell and staff (1925, 63 pages, illustrated) which contains detailed analytical data such as is necessary for intelligent conservation of a given species of fish. Embryology, food, growth, enemies and para-