

A PROJECTED *BIBLIOGRAPHIA PHYSIOLOGICA*

JOHN F. FULTON, M.D.

Reprinted from
BULLETIN OF THE MEDICAL LIBRARY ASSOCIATION
Vol. 27, No. 2, December, 1938

A PROJECTED *BIBLIOGRAPHIA PHYSIOLOGICA**

BY JOHN F. FULTON, M.D.

AMONG BIBLIOPHILES and bibliophilic institutions there has been a growing interest in the art of bibliography. I refer deliberately to the "art" rather than to the "science," because bibliography, like technical librarianship, cannot satisfy scholarly needs unless to the rule of thumb is added the technique of making information available. This latter ability of the successful bibliographer may merely involve a sense of artistic values in typography; but it generally involves far more: especially the capacity for brief annotation and interpretation. But far more important than all these is the inescapable fact that a *bibliographer, to discharge his responsibility adequately, must know what is in the book he is describing and how it relates to the history of ideas in the field to which it belongs.* Without this special knowledge a bibliographer becomes merely a "bibliomechanic" or "bibliometrician"; he transcribes the title, often in unnecessary detail, he measures and counts the gatherings and the pages, but without some knowledge of the contents of the book with which he deals he can never win for himself the honorable title of "bibliographer."

I realize that there are many¹ who do not share this opinion and who, with the *Oxford English Dictionary*, proclaim that bibliography has only to do with the description of the physical characteristics of a book, never with the contents. Although this general definition has been quoted by many distinguished bibliographers, they have by their published works uniformly belied their own definition and they have belied it in direct proportion to their distinction as bibliographers!

One can recognize two movements in modern bibliography, one the growth of the personal bibliography,² the other the bibliography of special subjects. The personal bibliography has attracted somewhat wider attention within the past few years—at least among bibliophiles—than has subject bibliography. One can think of many distinguished examples, particularly those gay and attractive bibliographies of Dr. Geoffrey Keynes of London, his John Donne,³ Sir Thomas Browne,⁴ Jane Austen,⁵ Blake,⁶ Hazlitt,⁷ Pickering,⁸ Harvey,⁹ and more recently John Evelyn.¹⁰ There have also been many bibliographies of modern novelists, and poets. One of the finest of the personal bibliographies is that of the sixteenth century

* Read at a symposium on Medical Literature at the Fortieth Annual Meeting of the Medical Library Association, Boston, June 29, 1938. From the Laboratory of Physiology, Yale University School of Medicine, New Haven.

surgeon, Ambroise Paré, recently issued from the New York Academy of Medicine by Miss Janet Doe.¹¹ This is at once an accurate bibliography, replete with useful detail, and at the same time, like those of Geoffrey Keynes, it is a humanistic document, giving a wealth of information concerning the man, his work, his printers, and his historical contemporaries. One also finds fair indication of the principal contents of the works described. The personal bibliography, when developed on lines such as these, will continue to be well received and widely encouraged.

The subject bibliography is old, and yet in the modern humanistic spirit of bibliography, it is something quite new. There have been subject bibliographies since the days of the earliest printers, and certainly since the time of Lecoq¹² and of those inveterate Dutch bibliographers, van der Linden¹³ and Cornelis à Beughem,¹⁴ who first classified the incunabula,¹⁵ issued separate bibliographies on history, physics, medicine, etc. Dibdin referred to Beughem as a man of "wonderful mental elasticity." Like Lecoq, he was a trail blazer, widely informed and versatile, his only fault being that he attempted more than he could successfully execute.

In the eighteenth century also there were subject bibliographies, most notable among them being the magnificent compilations of Albrecht von Haller. These I have already described elsewhere.² In the nineteenth century there were many subject bibliographies dealing with art, science, with bibliography itself, and with many other branches of learning, but there were curiously few bibliographies of the larger branches of learning. There are still no bibliographies, for example, of geology, astronomy or botany, and until the compilation of Riccardi¹⁶ there was nothing in the field of mathematics. Electricity, as a special subject, early attracted the attention of the bibliographers, and yet there is at the present time no really adequate bibliography of electricity apart from those compiled by a distinguished London bookseller. I am not forgetting the splendid catalogue of the Wheeler gift collection in the Library of the American Institute of Electrical Engineers (New York),¹⁷ but this is scarcely a bibliography of electricity. The need for such a bibliography for bibliophilic purposes, adequately annotated from the standpoint of the history of ideas, is keenly felt, not only among educators, but in every library that makes a pretense of serving the public in these times of increased historical consciousness.

This is not the place to stress the distinction between a catalogue and a bibliography. There are, to be sure, many *Bibliothecæ* such as those of Riccardi on Italian mathematics,¹⁶ and of Casey Wood on vertebrate zoology¹⁸ which are akin to exhaustive bibliographies. A special *Bibliotheca* such as Riccardi's, may comprise a virtually complete collection of a special subject. In this case the published catalogue becomes in fact a bibliography. The proposal which I am about to describe has reference, not to a *Bibliotheca physiologica* such as the Osler Catalogue in the field

of medicine,¹⁹ but a *Bibliographia physiologica*. For nearly 20 years I have been collecting the world literature of physiology. The collection is extensive, but by no means complete. I do not expect to issue a catalogue of the collection, but rather to make it the basis of a special bibliography for which information will be gathered from every library that may have relevant information. The project is therefore a much wider one than would be embraced by a simple catalogue, and in thus venturing to lay the plan before you, I am hoping to enlist your interest and coöperation, as well as your constructive criticism. I would like to have free expression of opinion now or later through correspondence, of the plan both in relation to its general scope and in regard to specific bibliographical details.

GENERAL SCOPE

The functions of the human body have invited the attention of the human mind since prehistoric times; phases of physiology such as the gushing of a cut artery were portrayed in the art of several primitive civilizations. The earliest written document of physiological import is the Edwin Smith Papyrus. Here it was recorded that the pulse was counted and from its rate and other characteristics the state of the health of the individual inferred; the effects of cerebral and of spinal injury are also described. Many other documents from ancient times might be cited in connection with physiological history. In compiling a bibliography of such material, especially of classical texts, the bibliographer must use the art of selection. He obviously cannot list all the incunabula editions of Pliny's *Historia naturalis*, nor would it be judicious to give an exhaustive bibliography of Galen's *De usu partium*. The modern student needs rather information concerning the manuscript sources of these authors, the *editio princeps* and the best modern critical texts and modern translations. It would, I repeat, serve no useful purpose to list the innumerable editions of classical texts, especially when these editions add nothing to the knowledge of the text itself. The attempt will be made, however, to include the relevant works of every classical writer who has contributed in any way to physiological knowledge. The list incidentally would be a fairly long one, for it would include not only well known names, such as Galen, Herophilus, Erasistratus, Aristotle, Celsus, etc., but many lesser names, Paul of Ægina, Ætius and literary works such as those of Aristophanes, Homer, Horace and others, who incidentally recorded physiological facts of major significance. The original source will be given in these instances with appropriate and brief annotation.

In approaching modern times we will find a varied list of names from the Renaissance period, beginning with the army surgeons, Henri de Mondeville, Guy de Chauliac, John of Vigo, and, of course, Ambroise Paré, and in another sphere great names such as that of Leonardo da

Vinci who first described the ventricles of the human brain, and who gave the first accurate interpretation of the valves of the heart and their function. Again, with such writers our bibliography would give the *editio princeps*, with information concerning the manuscripts, where these exist, and the best modern critical texts and translations.

In turning to the later period technical bibliographical descriptions assume a much larger importance. Thus in dealing with the works of Robert Boyle we must record the successive editions and refer to their significant textual changes. A similar problem would arise in the case of William Harvey. Obviously no one collector would ever be able to bring together all the relevant information for the whole sphere of physiology in a single personal collection. Information must be drawn from widely different sources and it is for this reason that I wish to enlist your active support.

SPECIFIC DETAILS

The details of the bibliographical entries can now be taken up and a few words may be said concerning the scope of annotations.

The entry. How much is to be included in each citation? Will books of all periods be treated similarly? These are questions which must be settled and freely discussed before embarking upon such an enterprise. Those who use bibliographical sources continuously soon become aware of the virtues and shortcomings of a specific bibliography. The *Bibliotheca Osleriana*,¹⁹ for example, admirable though it is in its unflinching accuracy, fascinating annotations and original arrangement, is distracting to a bibliophile in one particular respect, namely, that it does not include pagination. There is no way of telling from a given entry in the Osler catalogue whether one is dealing with a two-page pamphlet or a thousand-page treatise unless, as is often the case, it happens to be mentioned in the annotation. This serious shortcoming in a great catalogue arose from the fact that a set of library rules was imposed on the editors against their better judgment—the Bodleian Library had never indicated pagination in its catalogue and why therefore should Sir William Osler do so in his? I mention this in a pointed manner to emphasize the hazard of being limited by arbitrary rules. Members of the American Library Association are also exposed to the dangers incident to working by rule instead of principle, tending to be arbitrary and applying the same rules to books published in the sixteenth century as to those of the nineteenth. A special bibliographer covering the period from the fifteenth century to the present time would easily fall into a similar error if he attempted to treat books of widely different periods in the same manner. A few general principles, however, may be set forth as a basis for discussion.

The entry will begin with the full name of the author, followed by his dates, book titles need not be given in full, but all omissions in

transcription will be accurately indicated, and the title transcribed in sufficient detail: (i) to distinguish the book from any other with a similar title; (ii) to indicate its contents as fully as possible. Then will follow the publisher's place and name, date, size, and finally, the total pagination; figures and plates, if any, are to be indicated after the manner of the *Index catalogue of the Surgeon General's Office*. Notes will be appended in small print, in which the particular importance of the book or paper in the history of physiology will be stated together with other details of scientific and bibliographical interest. Examples of such entries are as follows:

ASELLI, Gasparo (d. 1626)

**De lactibus sive lacteis venis . . . Milan, G. B. Bidelli, 1627. 4°: 4 ll., 2 pl., 1 l., 2 pl., 3 ll., 79 [1] pp., 4 ll.*

The announcement of the discovery of the lacteals. This, the first edition, contains four colored plates, engraved title and engraved portrait of the author, both by C. Bassano. The woodcuts are in colored chiasoscuro, four colors being used; they are the earliest anatomical illustrations printed in colors. The F copy is from the Libraries of Fabri de PEIRESC and Jean Paul MARAT. At the foot of the historiated title-page is a peculiar and characteristic ownership mark of Nicolas Fabri de Peiresc, the famous contemporary patron of science. This cachet was deliberately constructed to prevent imitation or erasure and it shows through the page; it was identified by a previous French owner about the middle of the 19th century.

BOYLE, Robert (1627-91)

**New experiments physico-mechanicall, touching the spring of the air . . . made . . . in a new pneumatical engine. Oxford, H. Hall, 1660. 16 ll., 389 [1] pp. ("399," 90-99 omitted), 1l., 1 pl.*

In this, Boyle's first scientific work, he "proved that the air had weight and that the film of this gas normally surrounding the earth would support a column of 29 in. of mercury; when compressed to half its volume, it supported a column twice as high. Expressed in more general terms the volume occupied by the gas is reciprocal of its pressure. This law, which still passes under Boyle's eponym, was enunciated in 1662 in the second edition of his book; in the same work he tells of many interesting experiments on animals in which he had found that, if a candle were inserted along with a mouse in his exhaustion chamber, the mouse died and the candle went out almost simultaneously as the air was gradually withdrawn. This for the first time gave scientific proof of the statement made by Leonardo da Vinci many years before, and it also proved that *the animal and candle depended upon the air itself*, and that the two were not extinguished merely because of the accumulation of 'fuliginous vapours' incident to combustion."

SHERRINGTON, Charles Scott (1857-)

**The integrative action of the nervous system. (The Silliman Lectures.) New York, Charles Scribner's Sons, 1906, xvi, 411 pp.*

The first edition and first issue of the great modern classic on the functions of the nervous system, Sherrington's book has been described as the "De motu cordis" of the nervous system, being comparable in importance with the great treatise of

* An asterisk preceding an entry indicates that the volume in question is possessed by the compiler.

William Harvey. It has been 12 times reissued by Scribner's and the Yale Press, each time with a new date on the title, but has never been revised, and the plates are now (1938) worn out. It has been out of print since May, 1930.

Journal citations in the bibliography will be made in accordance with the conventions used in *A world list of scientific periodicals*²⁰ which is the only compilation giving *all* periodicals likely to be encountered in a medical library or medical journal office.²¹

Arrangement. After much thought it has seemed to me essential to adhere strictly to an alphabetical arrangement, rather than to classify by subjects or to adopt chronological sequence. Sir William Osler, as you no doubt know, made a compromise in his catalogue,¹⁹ subdividing his collection into several groups, one which he called *Bibliotheca prima* was arranged chronologically. At a glance one could see the foremost names in the order of their historical sequence. Lesser names were arranged alphabetically in his *Bibliotheca secunda*. Other sections were *Bibliotheca litteraria*, *Bibliotheca historica*, etc., and such subdivision has caused certain authors to appear in three or four sections of the catalogue, but the difficulties incident to this arrangement were met by the inclusion of a full index. For a bibliography such subdivision of materials seems undesirable. The works of a given author, when these are numerous, will however be arranged in chronological sequence to allow one to scrutinize the development of a particular individual's scientific ideas.

Typography. One of the foremost problems which confront the compiler of a bibliography is the choice and arrangement of type. In planning a *Bibliographia physiologica* I have examined many bibliographical compendia and I should like to direct your attention to six samples. The first is that of Cornelis van Beughem, *Bibliographia medica et physica movissima*. This, as you will see from the illustration (Fig. 1), is a simple alphabetical list, rather uninspired typographically and with little annotation. It is historically important because, as I have already indicated, this is one of the early subject bibliographies of medicine.

The next is a page from the remarkable bibliography of Riccardi's *Biblioteca matematica italiana*,¹⁶ showing the full character of the bibliographical descriptions, the excellent form of collation, and the attractive choice of type for the annotations (Fig. 2). The third example is from the Osler catalogue,¹⁹ an easily read page, attractive typographically, and a business-like production from the printer's standpoint, *i.e.*, no waste space and annotations well set off from bibliographical entries (Fig. 3). An interesting contrast to the Osler catalogue is that of Casey Wood's *Introduction to the literature of vertebrate zoology*¹⁸ also printed by the Oxford Press. No bold face has been used in the Osler format, whereas it has been freely used in Casey Wood's (Fig. 4). There is no doubt that the bold face helps the eye, but it seems somewhat too bold in relation to the type face used for the entries. A sumptuous biblio-

BIBLIOGRAPHIA MEDICA & PHYSICA

Novissima: Perpetuo Continuanda
fœ

CONSPECTUS PRIMUS

Catalogus Librorum Medicarum Chymico-
rum. Anatomiarum, Chymicarum,
Botanicarum ac & Physicarum, &c.

Quorunque Currente hoc Semifeculo, id
est ab Anno R. parate Saluis 1651. (inclusive) per
universam Europam, in quavis Lingua,

ORIENTALI tum GRÆCA, LATINA,
GALLICA, HISPANICA, ITALICA, AN-
GLICA, GERMANICA & BRITANICA,
Aut Novam Emendatioris & Audioris Typis
Prodidissent.

Undique acquisitis selectis, advenant & advenant
Opera ac Studia.

CORNELII BEUGHEM
Embricentis.



AMSTELÆDAMI.

Apud Janssonio-Waesbergas, 1681.

38

Bibliographia

corum. In quo quatuor millia circiter Aethorum
Chymicorum vel de Transmutatione Metallorum
de Minerali, & Arcanis, tam Manu scriptorum,
quam in lucem editorum, cum eorum editoribus,
usque ad annum 1643 continentur. Cum ejusdem
Bibliothecæ Appendice & Corollario. Parisiis 1634.
in 12. *Mihiid.* 1636. in 12.

De Urgenio Amiatino. Exerat cum Theatro Sym-
pnetico variorum Aethorum. *Nerbergæ* 1602.
in 4.

Hortus seu Armamentarium simplicium Planta-
rum & Animalium, ad Arcem Medicam spectan-
tium, cum brevi eorum etymologia, descriptione,
loco, tempore & virtutibus. *Æssii* 1667. in 8. *Paris.*
1669. in 8.

Historiarum, & Observationum Medico Physica-
rum Centuriæ IV. raræ suspensæ & inaudite. Ac-
cesserunt Illustri Cæleri observationes raris Borelli
communicatæ, cum vita P. enati Cartesii, eodem
Borelli auctore. *Cheris* 1633. in 12. *Parisii* 1636.
in 8. *Franciæ* 1670. in 8.

Eandem eorum quibus accesserunt Joan. Rhodii,
Arnoldi Boetii Sc-Parsi Mantis Bossii Observatio-
nes Medicinales. *Lipsiæ* 1676. in 8.

OLAUS BORNICHIVS De Ortu & Pro-
gressu Chymicæ differentio. *Helmæ* 1668. in 4.

Lingua Pharmaceoporum, sive de accurate Voca-
bulorum in Pharmaceopellis usitatorum pronuntia-
tione. *Isid.* 1670. in 4.

Hermetsis Ægyptiorum & Chymicorum sapientia
ab Herm. Contingit Animadversionibus vindicata.
Isid. 1674. in 4.

Deo-imite Metallica clarè & compendiaro tra-
ctata. *Isid.* 1677. in 4.

Eius Observationes, extant in Actis Acad. Natu-
ræ Curiosæ Germanicæ. Tom. I. & III.

Dissertat. de seculo suo Resp. Joh. Melch. Sarsæ.
Isid. 1677.

Alia

Cl. A.

Alia ejus Observationes exhibet Thom. Bombol.
in Actis Medicis & Philophicis Hædificatibus.
Vol. II. III. IV.

FRANCISCUS BOSELLUS Amalithum
Medico-Prædicum alii Historiarum. *Parisiis* 1667.
in 4.

JOANNES ANDREAS BOSIUS Differ-
entio Hædificæ de Clinicis veteris Esclæsiæ. *Jrma*
1675. in 4.

LEONARDUS BOTALLUS De Curatio-
ne per sanguinis missiorem liber. De incidenda ve-
ne, cutis scarificandis, & hirudinum affigendo-
rum modo. *Leidam* 1651. in 8.

Opera Omnia Medica & Chymica à Mulico
Joanis van Hornc. *Ingel.* *Ger.* 1666. in 8.

JOANNES BOUNDINIUS De Subtilitate
ægræ Romani tractanda. *Florentiæ* 1667. in 4.

FRANCISCUS BOURCHARDUS ejus
Observationes extant in Actis Acad. Naturæ Curiosæ
Germanicæ. Tom. III.

BOXBERGERUS Præses Me-
thodice Medicinalis. *Bombærgæ* 1677. in 18.

ROBERTUS BOYLE Nova Experimenta
Physico-Mechanica de Vi ætatis elasticæ, & ejusdem
effectibus, sicut maximam partem in Nova Me-
china Pneumatica; & ad (Nepotem suum) Nobili-
ssim. D. Carolum Viscomitem de Dunservan li-
teris prædictis transmissa. *Æt Anglico in Latinum*
notiè convertita. *Ornat.* 1666. in 8. *Hæd.* *Centur.*
1661. in 19. *Æpæd.* 1669. in 12. Et in Opus-
bus variis *Æpæd.* 1677. in 4. impræditis N. T.

De sensu Dogmatis de Elætere & Gravitate Aëris
propositæ à Dn. Rob. Boyle, in novis ejus Physico-
Mechanicis experimentis avertit objectiones
Francisci Linæ. Unè etiam Objectionis Franciscus
Hypothesis examinat, eaque ecrasione quædam
experimenta addidit. Ab Auctore supra dicto

39

Medica & Physica.

Alia ejus Observationes exhibet Thom. Bombol.
in Actis Medicis & Philophicis Hædificatibus.
Vol. II. III. IV.

FRANCISCUS BOSELLUS Amalithum
Medico-Prædicum alii Historiarum. *Parisiis* 1667.
in 4.

JOANNES ANDREAS BOSIUS Differ-
entio Hædificæ de Clinicis veteris Esclæsiæ. *Jrma*
1675. in 4.

LEONARDUS BOTALLUS De Curatio-
ne per sanguinis missiorem liber. De incidenda ve-
ne, cutis scarificandis, & hirudinum affigendo-
rum modo. *Leidam* 1651. in 8.

Opera Omnia Medica & Chymica à Mulico
Joanis van Hornc. *Ingel.* *Ger.* 1666. in 8.

JOANNES BOUNDINIUS De Subtilitate
ægræ Romani tractanda. *Florentiæ* 1667. in 4.

FRANCISCUS BOURCHARDUS ejus
Observationes extant in Actis Acad. Naturæ Curiosæ
Germanicæ. Tom. III.

BOXBERGERUS Præses Me-
thodice Medicinalis. *Bombærgæ* 1677. in 18.

ROBERTUS BOYLE Nova Experimenta
Physico-Mechanica de Vi ætatis elasticæ, & ejusdem
effectibus, sicut maximam partem in Nova Me-
china Pneumatica; & ad (Nepotem suum) Nobili-
ssim. D. Carolum Viscomitem de Dunservan li-
teris prædictis transmissa. *Æt Anglico in Latinum*
notiè convertita. *Ornat.* 1666. in 8. *Hæd.* *Centur.*
1661. in 19. *Æpæd.* 1669. in 12. Et in Opus-
bus variis *Æpæd.* 1677. in 4. impræditis N. T.

De sensu Dogmatis de Elætere & Gravitate Aëris
propositæ à Dn. Rob. Boyle, in novis ejus Physico-
Mechanicis experimentis avertit objectiones
Francisci Linæ. Unè etiam Objectionis Franciscus
Hypothesis examinat, eaque ecrasione quædam
experimenta addidit. Ab Auctore supra dicto

FIGURE 1

graphical format is that used by John Ferguson in his *Bibliotheca chemica*,²² but excellent though this bibliography is in so many respects, book titles are given in unnecessary detail, and the printer has made an unsuccessful attempt to use single and double columns on the same page (Fig. 5). The major bibliographical entries are set up across the entire page and the annotations follow below in double column. Few present-day printers could be persuaded to adopt such a compromise.

I come now to one of the least known, and, to me, one of the most satisfactory bibliographical compilations ever issued. I have reference to James Darling's *Cyclopædia bibliographica: A library manual of theological and general literature, and guide to books for authors, preachers, students and literary men. Analytical, bibliographical, and biographical*, published in London, in two volumes in 1854 and 1855.²³ A page from this great compilation is included in Fig. 6. The author's name is given in bold face then follows a brief biographical account and after that the principal writings which may also be annotated. Darling occasionally gives pagination of shorter tracts, but not consistently.

The bibliography of physiology is so far only a project—and this paper somewhat in the nature of a promissory note. I am not sure that any of us will live to see it completed; but before anything happens to any of you or to me, I want your counsel. Also when problems in the bibliography of physiological literature come to your notice, I hope you will not hesitate to write to me or to my librarian, Mrs. Peters. Such enquiries will help greatly to extend the usefulness of the bibliography.

REFERENCES

1. FERGUSON, J. *Some aspects of bibliography*. Edinburgh, G. P. Johnston, 1900. vi, 104 pp.
2. FULTON, J. F. Haller and the humanization of bibliography. *New Engl. J. Med.*, 6:59-64, 1932; see also Humanism in bibliography. An appreciation of Leonard Mackall. *Spec. Libr.*, 28:279-283, 1937.
3. KEYNES, GEOFFREY. *A bibliography of John Donne*. 2nd ed. Cambridge, University Press, 1932, xvi, 195 pp.
4. KEYNES, GEOFFREY. *A bibliography of Sir Thomas Browne, Kt., M.D.* Cambridge, University Press, 1924.
5. KEYNES, GEOFFREY. *Jane Austen: a bibliography*. London, Nonesuch Press, 1929, xxvi, 289 pp.
6. KEYNES, GEOFFREY. *A bibliography of William Blake*. New York, The Grolier Club, 1921. xvi, 516 pp.
7. KEYNES, GEOFFREY. *Bibliography of William Hazlitt*. London, Nonesuch Press, 1931, xx, 136 pp.
8. KEYNES, GEOFFREY. *William Pickering, publisher. A memoir and a hand-list of his editions*. London, The Fleuron, 1924, 110 pp.
9. KEYNES, GEOFFREY. *A bibliography of the writings of William Harvey, M.D.*, Cambridge, University Press, 1928, xiv, 67 pp.
10. KEYNES, GEOFFREY. *John Evelyn. A study in bibliophily and a bibliography of his writings*. New York, The Grolier Club, 1937, xx, 310 pp.
11. DOE, JANET. *A bibliography of the works of Ambroise Paré: Premier chirurgien et conseiller du roy*. Chicago, University of Chicago Press, 1937, xx, 266 pp.

12. LECOQ, P. *Bibliotheca medica*. Basel, 1590.
13. LINDEN, JOH. VAN DER. *De scriptis medicis*. Amsterdam, Joh. Blaeu, 1937.
14. BEUGHEM, CORN. à. *Bibliographia medica et physica novissima [1651-1681]*. Amsterdam, Jansson, 1681, 4 ll., 503 pp.
15. BEUGHEM, CORN. à. *Incunabula typographiæ*. Amsterdam, J. Wolters, 1688, 5 ll., 415 pp.
16. RICCARDI, I. P. *Biblioteca matematica italiana*. Modena, Erede Soliani, 1870, 2 vols.
17. WEAVER, W. D. *Catalogue of the Wheeler gift of books, pamphlets, and periodicals in the Library of the American Institute of Electrical Engineers*. New York, American Institute of Electrical Engineers, 2 vols.
18. WOOD, CASEY A. *An introduction to the literature of vertebrate zoology*. Oxford University Press, 1931, xx, 643 pp.
19. *Bibliotheca Osleriana*. Oxford University Press, 1929, xxxvi, 786 pp.
20. *A world list of scientific publications. 1900-1933*. 2nd ed. Oxford University Press, 1934, xiv, 780 pp.
21. FULTON, J. F. Note on *A world list of scientific periodicals*. *Med. Libr. Ass. Bull.*, 27:162-164, 1938.
22. FERGUSON, J. *Bibliotheca chemica*. Glasgow, Jas. Maclehose and Sons, 1906, 2 vols.
23. DARLING, J. *Cyclopædia bibliographica*. London, James Darling, 1854-55, 2 vols.