scientific and literary publications, and in 1886 a formal agreement was reached which was ratified by eight nations. Others adhered to the Brussels convention later, and with those countries that did not special arrangements were made for exchanges. The Smithsonian Institution was recognized as the official exchange agency of the United States.

Libraries, scientific societies, educational institutions, and individuals in this country who wish to distribute their publications abroad as gifts or exchanges send the separate addressed packages to the Smithsonian Institution, carriage cost paid. There they are sorted by countries and forwarded with similar shipments from other organizations to the exchange agencies in other parts of the world, where they are distributed to the addressees. Similarly, shipments of publications from exchange agencies abroad to this Institution are distributed free to addresses in this country.

The real contribution of the International Exchange Service lies in its promotion of the wide diffusion of scientific discoveries and of knowledge generally. It is often said that science knows no political boundaries, but without a general exchange of the published results of research, scientists would waste much time and effort in repeating work that had already been done elsewhere. Through the avoidance of such duplication of experimental work, progress in scientific achievement has been very greatly accelerated. The Exchange Service is a very tangible expression of the Smithsonian Institution's part in "the diffusion of knowledge" and also of the cooperative character of many of its activities.

The Library of the Smithsonian Institution

Leila F. Clark
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The library of the Smithsonian Institution, founded by the Act of Organization in 1846, with the initial purpose of procuring "a complete collection of the memoirs and transactions of learned societies throughout the world and an entire series of the most important scientific and literary periodicals," has been largely built up of publications received in exchange for the Institution's own publications. From the very beginning books and journals poured in, for the unique character of the new Institution itself and the quality of its first publications excited the interest of savants abroad as well as in America.

With this fine material in charge of the first librarian, Charles C. Jewett, a man of vision, tireless energy, and contagious enthusiasm far in advance of his time in library planning, the Institution was soon in possession of a well-organized and growing scientific library which was fast becoming a national reference and bibliographical center, for bibliography too was an early concern of the Institution. Not many years passed, however, before it became obvious that the increasing needs of the library for space and money, especially for carrying on certain of Mr. Jewett's plans for its future development, could not be met except by sacrificing too large a part of the funds and equipment needed to go on with the Institution's program for scientific research, and the regents decided that Mr. Jewett's program could not be supported further. But the library continued to grow, and its adequate housing and care presented serious problems. When a considerable amount of new space in the Capitol was made available to the Library of Congress, which at that time had about the same number of volumes as the Smithsonian library, the merging of the two libraries was proposed as offering advantages to both.

Consequently, upon recommendation of Secretary Henry, Congress in 1866 passed an Act authorizing the transfer of the library of the Smithsonian Institution to the custody of the Library of Congress, with special provisions not only for the continued freedom of its use by the Institution but also, through the secretary, for the same freedom of use of the Library of Congress as that enjoyed by members of Congress. Though the Act did not specifically require the deposit of later acquisitions, it was obviously important that the continuity of the sets of serial publications should be maintained, and in the years that have passed since the original Smithsonian Deposit of some 40,000 volumes was made, almost 1,000,000 volumes and parts have been added to it.

At the time of the transfer a small basic reference collection was retained at the Institution, while a messenger went daily to the Library of Congress to borrow whatever was needed for occasional use. As time went on, and the Institution initiated or was made responsible by the Government for more and more scientific and cultural enterprises, collections of books on the special subjects of its investigations began to be needed and were acquired, often more or less independently of each other.

In 1858, the Institution's Museum had become the authorized depository of the scientific collections of the Government, and after 1876, when there was a large influx of specimens from the Centennial Exposition in Philadelphia, it was officially designated as the U. S. National Museum. With the organization of its curatorial work begun, the Museum's need for a more adequate working library became acute. Museums, especially museums of natural history, both in this country and in Europe, had been undergoing transformation from what had been, in the main, cabinets of curiosities into scientific institutions. Scientific publication by museums was increasing enormously, and there was a corresponding rise in interest in museology as a subject for serious study.

So urgent was the need for more books that Secretary Spencer F. Baird in 1881 donated his own extensive private library, a valuable collection of standard works on biology and industry, to supplement the existing small nucleus of the Museum library. In response to a special circular many of the museums and scientific societies of Europe and America contributed sets of their publications, and new exchanges for the Museum's own publications were arranged. Second copies of many of the more

important series received by the Institution for the Smithsonian Deposit were also obtained by exchange, and other material was purchased.

Today the library of the National Museum numbers about 250,000 volumes, mostly on subjects with which the work of the curators is directly concerned—that is, the biological, geological, and anthropological sciences, the arts and industries, engineering, history and museology—and on many correlated subjects, especially scientific travels and geography. Of these books and periodicals, those devoted exclusively to special subjects, such as insects, plants, birds, graphic arts, and archeology, upon request of the curators concerned are assigned to sectional libraries in the various divisions of the Museum. These 31 sectional libraries vary in size according to the requirements of the division from fewer than 100 volumes to several thousand and are more or less fluid, in that volumes found to be no longer needed for immediate use in the division may be returned to the main library for filing.

The libraries of the other bureaus developed under the aegis of the Smithsonian Institution had origins similar to that of the Museum library—in the need for special working collections of books to be used as tools in aid of scientific research. The library of what is now the Bureau of American Ethnology had its beginning, coincidentally with that of the Bureau itself, in connection with the work of preparing for publication the archives, records, and materials relating to the Indians of North America that had been gathered by the geographical and geological survey of the Rocky Mountain region under Maj. John W. Powell. In 1879 Congress authorized the Smithsonian Institution to take over the direction of the work, and Secretary Henry appointed Maj. Powell to continue and complete it. For many years Maj. Powell had been director of the Geological Survey, and the Bureau of American Ethnology library was for some years housed in the Survey. Later the Bureau moved to rooms of its own on F Street and in 1909 was assigned to quarters in the Smithsonian Institution Building, where the library now occupies the east stack. This library is a carefully selected collection of about 40,000 volumes. Especially complete in source materials and other works dealing with the history, cultures, and linguistics of the North American Indians, it is now developing a similar collection on the Indians of South America. It includes also much material on the customs and languages of native peoples of other regions of the world.

Since its establishment in 1889 the National Zoological Park has assembled a small working library of about 4,000 volumes having to do especially with the taxonomy and distribution of wild animals and birds and with their care in captivity.

In 1890 was begun the formation of a special collection of books to serve the newly established Astrophysical Observatory in its studies of the constitution of the heavenly bodies and especially of the sun and its effects upon the earth. The Observatory library now has about 12,000 volumes on its shelves. In the Observatory's Division of Radiation and Organisms there is a small separate library of about 600 reference books and scientific journals, chiefly in the fields of botany, physics, and chemistry.

The library of what is now the National Collection of Fine Arts was until 1920 a small sectional library of the National Museum. In that year, the National Collection of Fine Arts, which was until 1937 officially named the National Gallery of Art, was made a separate administrative branch of the Smithsonian Institution, and the separate development of its library was begun around the nucleus of the books on fine arts withdrawn or transferred to it from the Museum library. It is now a growing art reference collection of 10,000 volumes, housed in rooms on the third floor of the Natural History Building.

The library of the Freer Gallery of Art had its origin in the small private collection of books on the art and culture of the East, a few of them in Chinese and Japanese, which Charles L. Freer had assembled and which came to the Institution as a part of his bequest. With the additions made to it since the opening of the Gallery in 1923, the library is now a fine reference collection of about 22,000 volumes, 6,350 of which are in Chinese and 780 in Japanese.

No coldly factual record of historic library dates and numbers of volumes can possibly give anything but an uncolored outline of the richly complex picture of books in use, and mention must be made of some of the persons whose business it was to acquire and make their use possible.

Charles E. Jewett, the first librarian, has long been one of the immortals of the library world, and it would be hard to overemphasize the important part he played in the early history of the Institution.

For many years after the termination of Mr. Jewett's services there seems to have been no one with the official title of librarian. The library was directly under the administrative charge either of the secretary or of the assistant secretary, and the work of receiving and recording accessions was assigned to clerical helpers, while some of the duties of librarian were performed by members of the scientific staff.

In the Institution's Annual Report for 1868 occurs the first mention of assistants in the library after the Smithsonian Deposit was made:

> Mr. Theodore Gill, who was formerly assistant in the library of the Institution, has been appointed one of the principal assistants in the national library, but he still continues his investigations in natural history at the Institution, and acts as the intermediate agent between the two establishments. Miss Jane Turner, who vindicates by her accuracy and efficiency the propriety of employing her sex in some of the departments of government, still continues to register the books as they are received through the extended system of international exchange.

The Annual Report for 1888 notes "the resignation of Miss J. A. Turner who had for many years performed the duties of librarian with the greatest diligence and faithfulness." The beautifully kept manuscript, "Turner records" of accessions, is still on file in the Institution.

Some of the library staff became almost legendary figures, and the 40-year service of Newton P. Scudder,

assistant librarian in the Museum, of encyclopedic memory, who, without benefit of subject cataloguing or recourse to a reference book, could produce upon demand the original description of a new species of insect, is still recalled with nostalgia by the older members of the present scientific staff.

John Murdoch was appointed librarian in 1887, and he served until 1891. Cyrus Adler, as librarian and later as assistant secretary in charge of the library, gave distinguished service to the Institution from 1892 until 1908. Paul Brockett was assistant librarian from 1902 until his resignation in 1924, and William L. Corbin, who was appointed librarian in 1924, served until his retirement in 1942.

The Smithsonian Deposit in the Library of Congress

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The Library of Congress is bound to the Smithsonian Institution with ties of the greatest intimacy. These ties are not merely the intangible ones of unity of purpose, *i.e.* "the increase and diffusion of knowledge among men." They are in fact visible and tangible bonds for all to see. Although the Library of Congress was already 46 years old when the Smithsonian Institution and its library were established, there began from the very moment of the birth of the younger institution a cooperation which has continued to this day to the mutual advantage of both and which has resulted in incalculable benefits to science and learning the world over.

The first systematic effort at cooperative cataloguing was proposed by the scholarly and imaginative librarian of the Smithsonian, Charles Coffin Jewett, and applied to the Library of Congress. As early as 1850 the Institution prepared a code of cataloguing rules together with a plan for stereotyping titles. Congress authorized the Institution to apply its rules and procedures to the collections of the Library of Congress, so that by 1854, 9,654 titles representing 21,805 volumes had been catalogued under this plan.

Under the old copyright laws the Smithsonian Institution was a co-depository with the Library of Congress for the receipt of copyrighted works. The Institution was instrumental in changing the copyright act so that the Library of Congress became the sole depository of such materials.

The final and firmest link in the bonds which united the two institutions was forged in 1866 when the library of the Smithsonian Institution was, by act of Congress, deposited in the Library of Congress. This action was necessitated by the growth of the Institution's library through its international exchange of publications to a size which it was unable to care for. Furthermore, this most valuable collection was endangered because it was not housed in a fireproof building. Thus, when commodious fireproof rooms were provided in the Capitol for the Library of Congress, the secretary of the Smithsonian Institution suggested that its books be transferred to the custody of the Library of Congress. In urging this action Joseph Henry wrote in 1865 as follows:

> The object of this transfer is not of course to separate this unique and highly prized collection of books from its relations to the Smithsonian Institution, for it must still bear its name and be subject to its control, but merely to deposit it where its preservation will be more certain and its usefulness more extended.

The act of transfer was approved by Congress on 5 April 1866. Of this transfer Prof. Henry later said:

> The union of the library of the Institution with that of the Congress still continues to be productive of important results. The Smithson fund is relieved by this arrangement from the maintenance of a separate library, while at the same time the Institution has not only the free use of its own books, but also those of the Library of Congress. On the other hand the collection of books owned by the Congress would not be worthy of the name of the National Library were it not for the Smithsonian deposit. The books which it receives from this source are eminently those which exhibit the progress of the world in civilization, and are emphatically those essential to the contemporaneous advance of our country to the higher science of the day.

True as these words of Joseph Henry were then, they are even more true today, for the 40,000 volumes of the original deposit have grown by a process of accretion and now number almost 1,000,000.

The publications deposited in the Library of Congress are received from all over the world by the Smithsonian Institution in exchange for its own publications or by gift. By far the largest and most important part of the Deposit is the collection of the proceedings and transactions of learned societies and institutions, and of other scientific and technical journals, which forms one of the most unique collections of such publications to be found anywhere in the world. Because of its size and importance this unit of the Smithsonian Deposit is familiary referred to as the "Deposit," but the Smithsonian Deposit also includes many thousands of other books, pamphlets, and manuscripts each marked with an identifying stamp but distributed and shelved throughout the Library according to classification. Notable among special collections that have been deposited by the Institution is the Langley Aeronautical Library of early aeronautical magazines, manuscripts, and other material which was transferred to the custody of the Library of Congress in 1930.

In 1897, when the Library of Congress occupied its new building, the importance of the "Deposit" was recognized by assigning it quarters on the northeast side of the second floor of the main building. In 1900 a special division of the Library of Congress, named the Smithsonian Division, was organized to care for the "Deposit" and for the distribution of all the current accessions received from the Institution. Francis Henry Parsons was assistant in charge of the Smithsonian Division from 1900 to 1925, and his diligent labors did much to develop the collection to its present state of eminence. In 1926 Frederick E. Brasch took over the duties of administering the Division. In the stacks adjacent were the main library collections of scientific works, and thus there