

# Paper Deterioration— An Old Story

BY LEE E. GROVE

IN 1960 a conference was held in Washington, sponsored by the American Library Association and the Virginia state library with the aid of a grant from the Council on Library Resources to discuss the permanent/durable paper developed by William J. Barrow.<sup>1</sup> Representatives of the papermaking and book publishing industries were present, as well as librarians. Criticisms of the new paper took such forms as: it would be wasteful and costly to try to upgrade the paper used for all books; much that was published was intended to be of only temporary use or was not in any case worth preserving; anything worth preserving would be reprinted if there was a need for it or if it became a "classic"; it was impractical to publish part of an edition on permanent/durable paper unless a large group of libraries subscribed for all copies in such an edition; there would be problems of printability; and manufacturers would be hesitant to increase paper prices simply to increase permanence or durability on a large scale. Both the problem of deterioration and some of the unconcern about it are an old story.

At the end of the fifteenth century, Johann Tritheim, a Benedictine abbot, was sufficiently troubled about paper to wonder how long a book printed on it would last. Writing on vellum, he felt sure, would last a millennium.<sup>2</sup> Though exceptions are not rare, by and large the old papers have endured very well. It was not until the content of papers and

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other elements of manufacture were cheapened that major trouble for libraries and other holders of books began. This contrast in papers is on occasion rather dramatically manifest in an early book expensively and elegantly rebound, say, about 1900; the paper of the text is still durable and reasonably fresh; the gold-tooled leather shows signs of appreciative care and, for the time at least, is holding up, but the endpapers supplied by the binder are already browning.

As long as printing was slow and literacy was limited, there was some balance between the making of paper and the market for it—between supply and demand. The trouble began, if "trouble" is not an understatement, when the spread of literacy enlarged the market for cheap reading matter, and faster presses operating at lower unit cost were developed. The situation was indirectly summed up in 1909 by a newspaper editorial upon the death of the inventive Robert Hoe, III, of the famous family of printing press manufacturers. Because of Hoe presses, said the newspaper, more information was now being published daily than had been printed within an average life span before Hoe's birth in 1839.<sup>3</sup> The larger

University of Pennsylvania Press, 1960), p.35. Also, G. S. Ivy, "The Bibliography of the Manuscript Book" in *The English Library before 1700*, ed. by Francis Wormald and C. E. Wright (London: University of London, The Athlone Press, 1958), p.37.

<sup>3</sup> Lee E. Grove, "Robert Hoe, III, 1839-1909," in *Grolier 75, A Biographical Retrospective to Celebrate the Seventy-Fifth Anniversary of the Grolier Club in New York* (New York: The Grolier Club, 1959), p.24.

<sup>1</sup> ALA and the Virginia State Library, *Permanent/Durable Book Paper, Summary of a Conference Held in Washington, D.C., September 16, 1960* (Richmond: Virginia State Library, 1960).

<sup>2</sup> Curt F. Bühler, *The Fifteenth-Century Book, the Scribes, the Printers, the Decorators* (Philadelphia:

and faster the presses, the more omnivorous the demand for cheap paper.

The imbalance between the supply of inexpensive paper and the printers' demand for it must have begun, in the United States, prior to the Civil War, judging from the more or less fumbling attempts to find a substitute for cotton rags. The days recalled by a once well known author and editor, Rossiter Johnson, were passing when "many American households kept themselves supplied with tinware by periodically exchanging the contents of their rag-bags with the itinerant peddler who called at the back door with a spring balance in one hand and a shining new pie plate or milk pan in the other. . . . All that is changed. The constantly increasing demand for paper and the never-ceasing rage for cheapness stimulated the ingenuity of the inventor to try every possible substitute. The Civil War, with its blockade of Southern ports, made cotton so dear that in the second year (1862) common bookpaper rose to 22 cents a pound."<sup>4</sup>

The *Boston Weekly Journal* for January 14, 1863, was printed on wood pulp paper, according to Dard Hunter, while the *Daily Journal* of the same date was on ordinary rag paper. An editorial stated that the entire edition of the *Journal* "for January 15 was printed on 'paper made of wood, a new process.'"<sup>5</sup> In 1929 two members of the staff of the New York public library examined the files of a number of old newspapers.<sup>6</sup> Although they relied upon experience, and their observation of discoloration and disintegration, rather than upon scientific tests, their findings can be considered at least substantially correct. In a tabulation of fifteen newspapers they found that one

<sup>4</sup> Rossiter Johnson, "Inferior Paper a Menace to the Permanency of Literature" (reprinted from the *New York World*), *Library Journal*, XVI (August 1891), 241-42.

<sup>5</sup> "Chronology of Paper and Allied Subjects," in *Papermaking, the History of an Ancient Craft* (2d ed.; New York: Alfred A. Knopf, 1947), p.565.

<sup>6</sup> "When Did Newspapers Begin to Use Wood Pulp Stock?" *Bulletin of the New York Public Library*, XXXIII (October 1929), 743-49.

used wood pulp stock as early as January 7, 1868, and the last of the other fourteen first used it on December 7, 1878. None used it consistently from the start. *The New Yorker Staats-Zeitung*, the first of those tabulated to use a wood stock paper, did not use it consistently until about two years had elapsed; the *New York World*, which first used wood stock in 1870—the year that the *Staats-Zeitung* adopted all wood—did not use it consistently until 1881. Even some single issues of newspapers during the transitional period contained leaves that were rag and others that were wood. "The change from rag to all wood paper was neither sudden nor uniform," they observed. No date is given in the tabulation as to when one of the papers began to appear consistently on all wood paper, but of the other fourteen, six had begun to use it consistently during the 1870's and the last of the remainder had begun to use it regularly in 1884.

Rossiter Johnson's feuilleton appeared in 1891. At this time he observed that several pre-Civil War books were in fine condition and then contrasted them "with this fine copy of Clarence King's 'Mountaineering [in the Sierra Nevada],' printed in 1874 . . . but the sickly yellow flag has already crossed the border and is steadily marching into the interior. So of the best American edition of Lamb's 'Essays of Elia' (1860), so of a pretty edition of Irving's 'Tales of a Traveller' (1865), so of numberless others. One of the most flagrant instances is furnished by a beautiful holiday book of permanent value, perhaps the finest that was issued in the season of 1882. The drawing and cutting of the illustrations alone cost \$5,000, and copies of the book, in the ordinary binding, sold for \$10. It is not yet nine years old, but it is already marked for destruction."

To Johnson's piece the editors of the *Library Journal* appended a shirttail: "Prof. Justin Winsor, foreseeing that in course of time the issues printed on the

ordinary newspaper of today must end in dust, fifteen or twenty years ago tried to induce the publishers of the leading daily newspapers of Boston to have a few copies of each issue printed on paper of extra good and durable quality, for the files of the Boston public library, with which he was then connected. But his efforts were in vain, because, as the proprietors of the journals put it, it was 'too much fuss.'<sup>7</sup>

In England, *The Library* of October 1898 printed a paper, "The Durability of Modern Book Papers," which J. Y. W. Mac Alister had read before the twentieth annual meeting of the Library Association during October of 1897. He said in part: "It is now nearly fifteen years since my attention was first drawn to the subject of the durability of modern book papers; and, as librarian of the Leeds library, I made certain simple experiments and observations which convinced me that many of the books on our shelves there, even if left untouched, would not outlast the present generation of readers, and I approached some of the leading publishers on the question, but with no useful result."<sup>8</sup>

Mac Alister gave the replies of twenty-three publishers. Their polite replies included the following: some publications were too transitory to be worth a better paper; if a book is important to a succeeding generation, that generation is sure to reprint it; papermakers should be induced to make a good paper at a moderate price; paper with sufficient finish to "take" process engravings presumably could not be made with qualities of permanence; if a certain number of copies were printed on a more durable paper, would libraries buy it? There were also publishers who thought the paper they were using was adequate. Amending the Copyright Act to provide that material deposited in the five copyright libraries

should be printed on paper of a certain specification was not a solution, Mac Alister concluded, because it did not protect other libraries. And he doubted whether in a free country Parliament would prescribe specifications for a "normal paper" and make it illegal to print books on any paper less durable. On the whole, he rather thought that the best solution would be for the Library Association and libraries connected with it to resolve collectively to admit no volumes to their shelves which did not meet certain standards for paper. If librarians adhered to this, he said, the publishers would soon find it advantageous to use durable papers.

The fact that Winsor approached the Boston newspaper publishers during his association with the Boston public library—from 1866 as a trustee to September 1877 when he resigned the librarianship—and Mac Alister was troubled about the quality of the new papers in the early 1880's indicates that the new papers were hardly coming into use before librarians began to feel concern. The concern was shared with others in the scientific field and seems to have grown as the century drew to a close.<sup>9</sup> In a book on cellulose, published in 1895, the problem is discussed, and the authors affirm: "Books and records have more than a passing value, and it is essential that they should be committed to pages suitably resistant both to chemical and mechanical wear and tear."<sup>10</sup> Consistent with this attitude is the statement in the preface that "The book is printed upon a paper carefully selected as composed of the 'normal' celluloses, and to the exclusion of the inferior 'celluloses' ordinarily employed for the manufacture of printing

<sup>9</sup> For example, the early abstracted entries in a useful bibliography, Robert P. Walton, "Causes and Prevention of Deterioration in Book Materials," *Bulletin of the New York Public Library*, XXXIII (April 1929), 235-66.

<sup>10</sup> C. F. Cross, E. J. Bevan, and C. Beadle, *Cellulose, an Outline of the Chemistry of the Structural Elements of Plants with Reference to Their Natural History and Industrial Use* (London and New York: Longmans, Green, 1895), p.304.

<sup>7</sup> The note was reprinted in *Bulletin of the American Library Association*, IV (September 1910), 675n.; *Public Libraries*, XV (October 1910), 324n.

<sup>8</sup> X, pp.295-304.

papers."<sup>11</sup> (With melancholy one notes in 1964 that browning and embrittlement are becoming evident in the volume.) Shortly thereafter paper deterioration was the subject of a careful committee report in a London journal.<sup>12</sup> "During the present century," it observed, "the paper-making industry has undergone many revolutionary changes . . . to meet the requirements of the enormously increased production of a quantity of new fibrous raw materials have been introduced and have taken their place in due course as indispensable staples. The more important of these, so far as concerns this country, may be noted in chronological order, thus: esparto, in the period 1860-70; 'mechanical wood' or ground wood pulp, in 1870-80; the wood celluloses, in the period 1880-90."<sup>13</sup> After finding that such factors as illuminating gas, acidity in the instance of mid-century rag papers, and oxidation in the instance of mechanical wood pulp, were involved in deterioration,<sup>14</sup> the committee enumerated four classes, or qualities, of papermaking fibers and described specifications for book papers to be used in publications of presumably permanent value.<sup>15</sup>

John Russell Young, then Librarian of Congress, also had something to say on the subject of deteriorating publications.<sup>16</sup> After declaring that "the question may well arise as affecting, not only our own, but all modern libraries, as to how much of our collections will become useless because of the deterioration and disintegration of the paper used in the cheaper forms of literature," he spoke of the Prussian government's regulations for papers for official use. He then added:

<sup>11</sup> *Ibid.*, p.vi.

<sup>12</sup> "Report of the Committee on the Deterioration of Paper," *Journal of the Society of Arts*, XLVI (May 20, 1898), 597-601.

<sup>13</sup> *Ibid.*, p.597.

<sup>14</sup> *Ibid.*, p.599.

<sup>15</sup> *Ibid.*, p.601.

<sup>16</sup> "The Durability of Paper," report of the Librarian of Congress for the fiscal year ended June 30, 1898 (Washington: Govt. Print. Off., 1898), pp.45-46. Appendix No. 4, pp.58-62, gives the Prussian government's specifications for paper for its official use.

"While this important question might readily come under government control, nothing being more essential than the physical integrity of the national archives, so far as the library is concerned a remedy could be found under the operation of the copyright law. An amendment that no copyright should issue until articles in printed form should be printed on paper of a fixed grade would remedy the evil, so far as the important libraries are concerned. There would be no trouble to the publisher beyond the cost of a few special sheets of paper and a slight delay in the presswork; and when the value of the franchise involved in a copyright is remembered the guarantee thus exacted as to the quality of the paper would be slight return for the privilege." The librarian also thought that the additional cost of the special paper would be happily borne by the libraries. This same year it was reported that a body of Italian librarians had resolved to petition their government to establish paper standards for official publications and a given number of books and periodicals, including newspapers, for the government libraries.<sup>17</sup>

The idea of special printings for the Library of Congress on good paper, as well as interest in the problem in general, continued into the next decade. In 1909 the preface to a Department of Agriculture report on papers for permanent records said: "In view of the great value to mankind of the results of scientific research and discovery achieved and published in the various bureaus of the government; and in view of the fact that the paper on which these results are now published is highly perishable [and in 1964 is obviously perishing], its life in many instances being only a few years, we urgently recommend that the necessary steps be taken to secure the printing on durable paper of at least part of the edition of each publication of lasting

<sup>17</sup> "Conference of Italian Librarians," *Library Journal*, LXXIII (December 1898), 667.

value, so that copies may be permanently preserved in the Library of Congress and other great libraries in this country and abroad."<sup>18</sup> In July 1909 there occurred one of those seemingly routine little events the effect of which was to be felt for some years. It was a discourse by Cedric Chivers, a Brooklyn bookbinder, on "The Paper and Binding of Recent Lending Library Books" at the American Library Association conference,<sup>19</sup> and it prompted discussion in library circles in Britain as well as in the United States. Chivers, who spoke from the binder's point of view and was concerned with the direction of the grain in leaves, because if it ran horizontally it was 45 per cent stronger than if it ran vertically, said that an examination of several hundred volumes revealed that since the year 1890 the paper used in books had deteriorated more than half—from 100 to 38 per cent.<sup>20</sup>

At the following annual meeting of the American Library Association Frank P. Hill of the Brooklyn public library spoke on the deterioration of newsprint.<sup>21</sup> Alluding to the talk by Chivers, Hill said,

<sup>18</sup> *Durability and Economy in Papers for Permanent Records*, a report submitted by H. W. Wiley, chief of chemistry and C. Hart Merriam, chief of the Bureau of Biological Survey, Committee on Paper for Departmental Use, by F. P. Veitch, chief, Leather and Paper Laboratory, Bureau of Chemistry (Washington: Govt. Print. Off., 1909), p.3, in the letter of transmittal to the Secretary of Agriculture, dated January 4, 1909. After referring to the weakening effects of acids, and suggesting that different qualities of papers be used for different types of official publications, the report—p.11—repeats the recommendation that small printings of each publication, "or certainly those of scientific value," be printed "on high-grade paper for distribution as permanent records to public and institution libraries."

<sup>19</sup> "The Paper and Binding of Lending Library Books," *Bulletin of the American Library Association*, III (September 1909), 231-51. Also reports of the address in *Public Libraries*, XV (May 1910), 192-93, and *The Library*, Series 2, I (April 1910), 221.

<sup>20</sup> Twenty years before, a European investigator, A. Martens, had reported that an examination of one hundred periodicals of permanent value revealed that only six were printed on paper which was likely to last many years. See "The Future of Our Printed Works," W. Herzberg, *Mitt. Kon. Materialprüfungssamt*, XXV (No. 3, 1907), 116-19; *Papierztg.*, XXXII, 3067; *Wochbl. Papierfabr.*, XXXVIII (June 1907), 1986-88;—as abstracted by R. B. Sosman in *Chemical Abstracts*, I (October 20, 1907), 2634.

<sup>21</sup> "The Deterioration of Newspaper Paper," *Bulletin of the American Library Association*, IV (Septem-

"if book-paper is bad, that used for newspapers is worse." He drew the familiar picture of newspapers published within the previous forty years which had begun to discolor and crumble to such an extent that "it would hardly pay to bind those which had been folded for any length of time." He spoke, too, as had others in the past, of the loss that historians would suffer if means for preserving newspapers were not found.

Hill asked several newspaper publishers about the deterioration problem and the possibility of running off extra copies on a better grade of paper for library purposes. Their replies apparently were more sympathetic than helpful. The better grades of paper, it was said, were not made to fit the large printing press rolls, and the limited number of copies of each issue which would be purchased would not compensate the publishers for the added cost of the paper and of changing rolls. Two other solutions suggested themselves: reprinting, which was eliminated because of the expense involved, and the use of some chemical preservative. "Cellit" was mentioned as a possibility.

A Cellit solution had been tried in the government paper testing institute in Berlin, Hill said, and the head of the institute had reported "some excellent results." The method involved dipping the sheets, one by one, in the solution, then hanging them up to dry. If the sheets were too far deteriorated to hang up they were spread on large nets to dry. The German reported that when dry the sheets had a parchment-like firmness and could be readily handled; they suggested that since the solution was being commercially manufactured several quarts be imported for experimentation. Unfortunately, as Hill pointed out, there would still remain the problem of the volumes already bound.

ber 1910), 675-78. Also, abstract, "The Deterioration of Paper Used for Newspapers," in *Public Libraries*, XV (October 1910), 323-25.

Hill suggested that a committee be appointed to confer with newspaper publishers on the problem of deterioration and expressed the hope of finding a practical remedy, possibly printing some copies of each issue on paper which had been treated with the solution. The suggestion was approved.

The appointment of the committee came too late for it to prepare a report for the following annual meeting of the American Library Association, but at the succeeding one the committee was ready.<sup>22</sup> The committee reported that a meeting had been held with a group of publishers, and it had been concluded that there was no practical objection to printing extra copies of current issues on a better grade of paper; the committee proposed to pursue the matter. The Brooklyn *Daily Eagle* advised the committee that for mechanical reasons it was in a better position than some of the larger papers to run off copies for library use and that it would try to do so at the beginning of the year (1913). The committee also reported that insofar as it knew, the first and only newspaper in the nation to print extra copies on better paper was the Red Wing, Minnesota, *Republican*, which furnished copies to the Minnesota Historical Society.<sup>23</sup>

A large part of the committee's report was taken up with an account of experiments by Chivers with a Cellit solution. This was described as a "solution of cellulose and spirit, into which the paper may be dipped, and thoroughly saturated. The spirit quickly evaporating leaves the paper quite tough. The result is a very satisfactory paper. It is, however, practically impossible to dip so large a surface as a newspaper into this solution.

<sup>22</sup> "Preservation of Newspapers," *Bulletin of the American Library Association*, VI (July 1912), 116-20.

<sup>23</sup> The paper, now the *Daily Republican Eagle*, began printing copies on a slick white sulphite paper May 11, 1908, and continued through the February 7, 1913 issue when a new press apparently prompted discontinuance of the special edition. (Letter from T. Deahl, newspaper curator, Minnesota Historical Society, October 15, 1963.)

The fibre when wet is too weak to handle; also the spirit in the solution quickly evaporates, leaving a glutinous mass, impracticable to deal with." Chivers suggested that newspapers to be retained should be put aside the moment they arrived in a reading room, shielded from light, air, and the deleterious atmosphere. As soon as a volume was completed it then should be bound and the edges of the paper painted with Cellit. When the spirit evaporated, he said, a coating was left on the edges of the volume which was not glutinous and did not cause the leaves to adhere to each other. Such a newspaper file "would last for a great number of years."

In January 1913 the Committee on the Deterioration of Newsprint Paper reported to the American Library Association Council on the results of its work during the previous year.<sup>24</sup> A conference had been held in Brooklyn in November 1912 with representatives of several New York newspapers, and John Norris, the chairman of the American Newspaper Publishers' Association's committee on paper, had submitted a report which described the specifications of the American Chemical Society for paper for its records and reported an investigation begun in 1904 by the Bureau of Chemistry, under authorization of the Secretary of Agriculture, which had led to a set of specifications. In the discussion which followed it was agreed that the extra cost of a better grade of paper for a special library edition would not be too great, that there would probably be no difficulty in getting paper mills to produce the paper, but that the cost of printing a special edition would be one which each newspaper would have to determine for itself and would probably vary considerably in different offices because of their using different types of presses. It was concluded that the publishers' committee would seek to learn how many newspa-

<sup>24</sup> "Preservation of Newspapers," *Bulletin of the American Library Association*, VII (January 1913), 22-28.

pers would be willing to print an extra edition and the ALA committee would ascertain the number of libraries willing to subscribe to the special edition and to which newspapers they would subscribe.

The publishers' committee circularized all 330 members of the newspaper association and received 167 replies. The great majority of the publishers thought that the cost of a special edition would be prohibitive. A few papers were not only opposed to the idea but ridiculed it. The *New York Evening World* of December 11, 1912, referred to "pickled" newspapers and belittled their value to future students. But ten newspapers were sufficiently understanding to believe that the cost and labor might be justified, and several others, while reserved in their interest, were not wholly negative. The day following the *World's* editorial, the *Brooklyn Daily Eagle* stated its belief that newspapers had their value for posterity, and on December 14, in support of its convictions, announced that as of January 1, 1913, it would issue an additional edition on 75 per cent rag paper at a subscription price of \$15 per annum.

The ALA committee circularized 180 libraries and received 144 replies. All were anxious to have newspapers on a better grade of paper for binding purposes, but most wished to subscribe for a local paper only.

The library committee, having "learned that there is no insurmountable barrier to prevent the printing of a special edition of a newspaper after the regular edition has been run off—provided librarians will interest themselves in the subject and will be willing to pay for such an edition," said that further action was up to the individual libraries and state associations and asked to be discharged.

The situation in 1915, when an article on newspaper preservation by H. M. Lydenberg was published,<sup>25</sup> was not much different than it was when the ALA com-

mittee had made its report two years earlier, but World War I was now in progress. Lydenberg, chief reference librarian of the New York public library, described various experiments which that library had made. After discarding thought of using any of the transparent compounds produced on the Continent—because they had not been thoroughly tested by use and were also expensive, difficult to obtain, and required particular skill in application, and because treating the edges of a bound volume, as Chivers had earlier suggested, did not offer much protection to volumes in constant use—Lydenberg said the library tried muslin, chiffon (light, thin silk), and Japanese tissue paper. In the experiment with muslin, a newspaper page was mounted on each side of a sheet of the cloth. This had the advantage of making cutting or mutilating more difficult, but the bulk of a leaf was nearly tripled and the paper was still exposed to deterioration by light and air and by handling. In the instance of chiffon and tissue, the leaves were sandwiched between two sheets. Tests showed that tissue, which was applied with a pure rice paste, gave the best protection against light and air; pliability and strength were improved, and the cost of tissue was about a third that of silk. Nevertheless, the treatment cost about \$35 for a bound volume containing a month's issues of an ordinary morning daily. In view of the backlog of newspapers needing attention, this was considered prohibitive.

As for special editions of current newspapers on better stock, there apparently were none. "The experiment of the *Brooklyn Eagle* along this line in 1913 you will doubtless recall," said Lydenberg. "The *Eagle*, if my memory is correct, had subscriptions from fourteen libraries for its special edition printed on paper containing 75 per cent of rag stock at \$15, giving a credit account of \$210; the cost of the paper was \$2,367, which gave the *Eagle* a loss of \$2,157 for paper stock alone,

<sup>25</sup> "Preservation of Modern Newspaper Files," *Library Journal*, LX (April 1915), 240-42.

leaving entirely out of consideration the charges for extra labor involved." Tentative suggestions to New York City publishers that perhaps the papers might like to share the cost of preserving their files met with no interest. All that was left was to suggest that the libraries have a stock of paper suitable for newspaper presses made according to specifications and that one or more newspapers be told that it would be furnished them free if they would run a small number for subscribing libraries.

Nothing came of this idea, but the New York public library did not give up. In its first experiments with Japanese tissue the work had all been done by hand. Lydenberg in 1918 reported on an improvement, as well as on some other experiments.<sup>26</sup> A pasting machine had been found on the market which, with some adaptation, could be used in treating newspaper leaves with tissue. With the reduction in labor costs, volumes could now be bound for about \$25. The library asked the New York City publishers whether they would be willing to pay \$20 per volume toward the cost of binding the library's files of their own papers. One publisher was willing to spend the money.

Lydenberg also spoke of experiments with chemical treatment of newsprint. Casein, put on with a brush, had been tried elsewhere without success and in the instance of coated paper was said to be definitely injurious. Zapon,<sup>27</sup> a celluloid solution, had been tried by the library before, but not with a spray brush. "We found it increased the thickness very slightly and likewise increased the strength to the paper but slightly. The same remarks apply to the solution of shellac and glycerine, and of shellac, turpentine, and paraffin," Lydenberg said. A flexible var-

nish with a basis of linseed oil and resin "was satisfactory in practically every respect, except that it was difficult to get an even distribution and satisfactory transparency and smoothness." At this point wartime government requisitions prevented the manufacture of more of the varnish for the library. The varnish, in any case, was only suitable for treatment of current newspapers before binding. No chemical treatment, it was concluded, could substitute for Japanese tissue in the preservation of mutilated sheets in bound volumes.

Harry Lydenberg and his fellow members of the ALA committee, Frank P. Hill and Cedric Chivers, were handicapped by lack of funds and other factors and in the following months had nothing new to report. They recommended that they be discharged.<sup>28</sup>

The Brooklyn *Eagle* had been unsuccessful in its well-intentioned effort to publish a library edition, but in January 1927 the New York *Times* began publication of a rag paper edition for archival purposes.<sup>29</sup> It was available to the public on a subscription basis. Publication continued through June 30, 1953, at which time it was discontinued because of the increased cost of production resulting in increased subscription costs which worked a hardship on libraries, and secondarily, because a microfilm edition, with its savings in cost and storage space, was preferred by subscribers.

In the latter part of the 1920's commercial organizations in increasing numbers had begun to microfilm their records. In the latter part of the following decade libraries were adopting the practice, finding in the technique a palliative for the problem of preserving newspapers, while

<sup>26</sup> "Report of Committee on Deterioration of Newsprint Paper," *ALA Bulletin*, XIV (July 1929), 310.

<sup>26</sup> "Present Discontents with Newsprint Stock," *Bulletin of the American Library Association*, XII (September 1918), 211-16.

<sup>27</sup> Zapon had aroused some interest at the beginning of the century. See "The Zapon Conference," *Library Journal*, XXV (January 1900), 19; and "Zapon as a Paper Preservative," XXV (June 1900), 284-85.

<sup>29</sup> Letter from Chester M. Lewis, chief librarian, *New York Times*, December 23, 1963. There are rag paper copies, including newsstand editions, dating from July 8, 1929, to sometime between 1950-1955 of the *Detroit News* in the files of the Library of Congress, according to James O. Sutton of the serials division, January 7, 1964.



incidentally gaining such advantages as savings in storage space, binding costs, and easy dissemination of secondary copies. It was fortunate that the possibilities offered by the old technique of microphotography became apparent, for in 1960 a manual on preservation could still say: "the newspaper, once it began its career on wood pulp paper, became for preservation purposes practically a lost cause. Its inevitable disintegration calls for putting the text on microfilm as quickly as possible."<sup>30</sup> Whether this will be the thinking ten years hence remains to be seen. The library world has had to readjust its thoughts more than once; no one today, for example, would think of putting celluloid or a celluloid solution in contact with newsprint or a book.

As has been traced from disintegrating library periodicals, the modern concern for the preservation of books is as old as that for newspapers, but large scale microphotography has not been the persuasive panacea for books that it has been for newspapers. Individual books have been silked, laminated, or de-acidified, small editions have been produced through microphotography or other methods, but a practical method of preserving the vast quantities of books on the shelves of large libraries is not yet available.<sup>31</sup>

Since it is too expensive to de-acidify and laminate every book printed during nearly almost all of the past hundred years, and since the cost of microfilming everything is both financially and bibliographically appalling—as well as is the thought of the storage space saved through microfilming being pre-empted by more microfilm reading rooms—new solutions must be found. Perhaps one of these may

be the development by the W. J. Barrow research laboratory of an aerosol de-acidification method practical for large scale operation. The Council on Library Resources has been supporting work in this direction by the laboratory. Possibly, too, the answer lies in the establishment of a central storage library for deteriorating materials, an idea presented by Gordon Williams in the course of a study made for a meeting of the Association of Research Libraries' Committee on the Preservation of Research Library Materials held at the Library of Congress in December 1963. Such a library would accept deteriorating original materials from other libraries and endeavor to preserve them under the most favorable conditions, including low storage temperature. Other libraries, when requesting a title, would be provided with a photocopy.<sup>32</sup> The thought of such a storage library, which might in a relatively short time be the custodian of several million books, with other millions of aging works to come, is rather startling. But is it any more startling than the thought of the original records of world civilization for a century, all the annals, all the creative work, faded away in another hundred years or so?

Meanwhile, the problem is daily being aggravated as materials printed on weak papers continue to pour from the presses in increasing number. Here again the oft-heard fallacy that not all is worthy of preservation is met by Mac Alister's remark years ago: "it is not for us, in 1897, to say what among the books of this year shall be deemed of great importance by our descendants 200 years hence." Perhaps he was thinking of George Steevens, toward the end of the 18th century, rummaging around for old books that could shed light on a playwright, Shakespeare, or of the Bodleian discarding a First Folio because the new third collected plays was better.

Ameliorating the situation somewhat

<sup>30</sup> Harry Miller Lydenberg and John Archer, rev. by John Alden, *The Care and Repair of Books* (4th rev. ed.; New York: R. R. Bowker Company, 1960), p.43.

<sup>31</sup> For an indication of the magnitude of the problem see W. J. Barrow and Reavis C. Sproull, "Permanence in Book Papers," *Science*, CXXIX (April 24, 1959), 1075-84; and Edwin E. Williams, "Magnitude of the Paper-Deterioration Problem as Measured by a National Union Catalog Sample," *CRL*, XXII (November 1962), 499, 543.

<sup>32</sup> The description of the plan here is an oversimplification.

at the moment, and hopefully more so in the future, is the development of specifications for permanent/durable papers by William J. Barrow, with the support of the Council on Library Resources, and by others in private industry, and the gradual appearance of these papers on the market.<sup>33</sup> Whether all of these papers meet desirable minimum standards and indeed what constitute minimum standards, is one of the subjects being investigated by the Joint Committee on Perma-

<sup>33</sup> A set of specifications for a permanent/durable book paper, as well as a list of some manufacturers producing papers said to have these qualities, will be found in Verner W. Clapp, "Permanent/Durable Book Papers," *ALA Bulletin*, XLVII (October 1963), 847-52.

nent/Durable Paper, established by the American Library Association in 1961. This committee includes representatives of the papermaking, printing, publishing, library, and scholarly worlds.

It remains to be seen if the present activity comes to aught, or if the history of active concern will fade again. John Shaw Billings was thinking of the affairs of the New York public library when he recalled the words of the preacher to his flock,<sup>34</sup> but the words apply equally here: "Remember, brethren, we am all in de hands of an unscrupulous Providence." ■ ■

<sup>34</sup> *Library Journal*, XXIII (May 1898), 183.

## Additional ACRL Appointments

THE CHAIRMAN of the ACRL Committee on Local Arrangements, Detroit Conference, is Robert T. Grazier, Wayne State University libraries, Detroit. Members of the committee are Carl Orgren, Mary Ruskin, Norman Tanis, and Harold Young.

The College Libraries Steering Committee includes the current officers plus officers from two previous years: Charles M. Adams, Helen Bliss, and Anne E. Edmonds.

The section's *Ad Hoc* Committee on Community Use of Academic Libraries is chaired by E. Junius Josey, Savannah State College library, Savannah, Ga.; George C. Elser, Jr.; Edward C. Heintz; Richard C. Quick; Janet F. Schmidt; and John E. Scott are committee members.

Charles M. Adams, Woman's College library, University of North Carolina, Greenboro, is chairman of the College Libraries section *Ad Hoc* Committee on Undergraduate Materials and Services in Non-Western Studies. Committee members are Paul H. Bixler; Anne E. Edmonds; James H. Richards, Jr.; and Philip D. Shore.

Warren M. Morris, Knox College library, Galesburg, Ill., is chairman of the Nominating Committee for the section. Committee members are Rev. Andrew L. Bowhuis, Dorothy M. Drake, Dan M. King, and Minnie McFadden. ■ ■