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The MINNESOTA ACADEMY of NATURAL SCIENCES

MARTHA C. BRAY

IN A COMMUNITY which created a historical society in 1849, almost as soon as its government was organized, and which chartered a university only two years later, one would expect to find before long an association dedicated to the advancement of science. Nor would one be disappointed: on January 6, 1873, the Minnesota Academy of Natural Sciences was formed in the Minneapolis office of Dr. Asa E. Johnson. The eleven forward-looking citizens who became its charter members hoped their society would provide a nucleus for the scientific developments which they felt sure would flourish in Minnesota, and they sought to make Minneapolis the state's scientific center by specifying in their constitution that all future meetings of the organization must be held there.[1]

At a planning meeting in December, 1872, the founders had considered the name "Geological, Paleontological, and Archaeological Society of Minnesota," but they had dropped it in favor of "Minnesota Society of Natural Sciences."[2] When the group was formally organized the term "academy" was substituted for "society." Thus the infant association was placed in the earliest and most dignified tradition of American scientific societies — a tradition begun earlier in the nineteenth century by the Academy of Natural Sciences in Philadelphia and the New York Academy of Sciences in New York City, both distinguished for their contributions to science and culture in their communities. Academies reflected an early awareness of the need for knowledge of natural resources and of the practical importance as well as the intellectual pleasures of observing and collecting. Like lyceums, they were not exclusively centers for scholars and professional men. Membership was open to all who were interested in science, self-improvement was a strong motive, and free discussion was earnestly encouraged.[3]

The founders of the Minnesota academy included six physicians, a businessman, an instructor in mathematics, a dentist, and a superintendent of schools. Only one of the eleven was a professional scientist. He was Newton H. Winchell, director of the geological and natural history survey that had been authorized by the state legislature in 1872. At the end of the first year the membership

[1] Harlow C. Gale, "Historical Sketch of the Minnesota Academy of Science," in Minnesota Academy of Science, *Bulletins*, 4:430 (Minneapolis, 1910); *Bulletins*, 1:3 (Minneapolis, 1873).

[2] Christopher W. Hall, "The Place of the Academy of Sciences in the American Community," [1891?], an address included among the papers of the Minnesota Academy of Science, owned by the Minneapolis Public Library. These will hereafter be cited as Academy Papers.

[3] *Minneapolis Tribune*, January 6, 1873; William W. Smallwood, *Natural History and the American Mind*, 156–160 (New York, 1941); Ralph S. Bates, *Scientific Societies in the United States*, 28 (New York, 1945).

had increased to thirty-two, and their occupations still represented a cross section of the community: a civil engineer, a druggist, the postmaster, bankers, lawyers, real estate men, lumber dealers, a mechanic, and two ministers. One member, William Cheney, listing himself as a meteorologist, served as correspondent of the Smithsonian Institution and as a voluntary observer for the United States Signal Corps. His daily records of the weather appeared in the *Minneapolis Tribune* during the 1870s and 1880s. Another, Dr. Philo L. Hatch, was a recognized ornithologist as well as a physician.[4]

However varied their occupations, the early members of the academy subscribed to the purposes outlined in its constitution: "to observe and investigate natural phenomena; to make collections of specimens illustrating the various departments of science; to name, classify, and preserve same; also, to discuss such questions as shall come within the province of the Academy." The eight sections of scientific specialization listed in the bylaws reveal a good deal about the understanding of science at that time. They included geology and paleontology; mineralogy and chemistry; zoology and comparative anatomy; archaeology and state history; botany and entomology; ornithology; meteorology and physics; and conchology.[5]

The formation of the new group was noticed and welcomed by several leading members of the American scientific community. Foremost among them was Joseph Henry, executive secretary of the Smithsonian Institution, who wrote a letter of congratulation and offered the academy his fullest co-operation. He urged above all that such local organizations encourage "the farmer and mechanic alike" to develop the habits of observing and collecting. "It is of vast importance to an individual that he be awakened to the consciousness of being in a universe of most interesting phenomena," Henry wrote, adding that an academy "can make collections of the flora and fauna, of the fossils, rocks, minerals, etc. of a given region . . . and thereby contribute essentially to the knowledge of the general natural history of the continent." A few days later he wrote a hasty note saying that the constitution of the academy had since been called to his attention and that he wished to apologize for having mistaken its purpose as "the diffusion" of knowledge rather than its "increase." He believed, however, that in a community where "the number of actual workers in the line of science must of necessity be few" the two objectives could well be combined. Dr. Alfred E. Ames, the academy's secretary, thanked him for his wise counsel and his understanding.[6]

THE ACADEMY sought to implement its program through four main lines of activity. First in order of importance was the establishment of a museum, which was considered "utterly indispensable" to the encouragement of collecting and preserving and to the increase of scientific knowledge concerning Minnesota.[7] Closely related to this effort was the assembling of a scientific library. The "diffusion" of knowledge was carried on through meetings at which papers, both amateur and professional, were presented and discussed. The same purpose was further served by publication of a series of official *Bulletins* containing some entire papers, abstracts of others, proceedings, reports, and records.

A museum, then as now, was not only a means of public edification but also a neces-

[1] Newton H. Winchell, "The Founders of the Academy," in *Bulletins*, 5:108 (Minneapolis, 1914); *Bulletins*, 1:42. The charter members were Alfred E. Ames, Asa E. Johnson, Adolphus F. Elliot, William H. Leonard, Charles Simpson, and C. E. Rogers, physicians; Mark D. Stoneman, dentist; Samuel C. Gale and A. W. Williamson, businessmen; Newton H. Winchell, geologist; E. W. B. Harvey, educator.

[5] *Bulletins*, 1:3–5. In 1880 the sections were revised to include twelve categories: anthropology, astronomy, biology, botany, chemistry, geology, invertebrate zoology, mineralogy, microscopy, mechanical philosophy, physics, and vertebrate zoology.

[6] Henry to Ames, July 22, 30, 1873; Ames to Henry, August 8, 1873 (copy), Academy Papers.

[7] Philo L. Hatch, "Opening Address," in *Bulletins*, 2:41 (Minneapolis, 1882).

sary laboratory for the scientist. None existed in Minnesota at the time, although the law authorizing the geological and natural history survey in 1872 had provided for the establishment of a museum under the board of regents of the university.[8] In the glow of frontier optimism, however, it was hard to know which institution would prosper most, and great hopes were held for all. The fact that Winchell was officially connected with two potentially competing museums was apparently questioned by no one.

At the end of a year Charles Simpson, the academy's first curator, wrote enthusiastically that the collection was "deficient only in a greater degree than museums of greater growth." Some display cases suitable for geological and mineralogical specimens were already on hand, while ten more cases with glass covers were on order. In 1876 the academy had some three thousand specimens, two thousand of which were geological.[9]

Contributions came from members and such distant friends as Professor Henry A. Ward of Rochester, New York, who presented the academy with busts of the celebrated European scientists Thomas Huxley and Carolus Linnaeus. Another friend, Professor Frederic L. Washburn of the University of Oregon, was instrumental in supplying the museum with a set of marine vertebrates and invertebrates from the Atlantic Ocean.[10]

While gifts from individuals varied considerably in quality, all were welcomed. An assistant engineer on the Union Pacific Railroad collected fossil specimens in Wyoming

CHRISTOPHER *W. Hall*

and sent them to the academy with an accompanying note, explaining that his contribution was "geological, bugological, fishological or illogical, I don't know which, but not being an ologist of any kind, I am unable to give the society any information. If Darwin is true," he continued, "these are the ancestors of the present miners."[11] Thomas Lowry, the Minneapolis financier, sent two mummies from Egypt for the entertainment of children. Meanwhile the co-operation promised by the Smithsonian resulted in periodic exchanges with that institution which further enriched the collection. In 1891 Christopher W. Hall, a professor of geology at the University of Minnesota and the academy's long-time secretary, noted that the organization had momentarily "stepped aside from our scientific collecting to secure a fine assortment of models to illustrate the various applications of the inventive genius of our country." It was to be hoped, Hall added, that the academy museum "shall be *the* Natural History and Economic Collection of the Great Northwest."[12]

In the accumulation of a library the academy was greatly aided by the practice of exchanging publications with other scientific societies. This custom, inaugurated by

[8] Minnesota, *Laws*, 1872, p. 87.

[9] Charles Simpson, "Report of the Curator of the Museunm," in *Bulletins*, 1:71; Curator's Report, 1876, in Academy Papers.

[10] Curator's Report, 1876; Washburn to Christopher W. Hall, February [?], 1886, Academy Papers. Washburn had acquired the collection while sailing on the United States Fish Commission ship, the "Albatross," in the winter of 1885–86.

[11] E. S. Alexander to Hall, July 25, 1881, Academy Papers.

[12] Thomas Downy to William W. Folwell, December 23, 1886, Academy Papers; Hall, "The Place of the Academy of Sciences."

the Smithsonian, had by 1870 been generally adopted by both local and national organizations in the United States. From the outset the Minnesota academy carried on an enthusiastic exchange program. As early as May, 1873, Dr. Ames announced to the membership that he had been "in communication with most of the learned societies in the country." His efforts provided the academy with 164 publications from similar societies in the United States during its first year. In addition there were exchanges with organizations in France, Spain, and the Scandinavian countries. In 1877 Dr. Hatch, then serving as corresponding secretary, grumbled at paying $2.70 on documents received from some "unpronounceable institute in Denmark." Ten years later the academy was exchanging publications with 94 foreign and 203 American groups, and the number continued to increase each year.[13]

Meetings, open to the public, were part of the society's activities from the first. They were mainly devoted to reading and discussing papers that represented original research by the members. On the whole, the selection of topics was interesting and lively. Attendance varied, but in general twenty was considered a good crowd. In 1891 a record-breaking audience of 125 heard Dr. W. Xavier Sudduth of the University of Minnesota lecture on the evolution of teeth, but the large attendance may have been due to the novelty of the "photomicrographs thrown on the screen" that Sudduth used to illustrate his talk.[14]

Amateur members tended for the most part to write on subjects of general and speculative interest, but there were among them a few avid and constructive collectors and classifiers in special fields. Dr. Johnson, the first president, was among the most industrious of these. His paper on "Mycological Flora of Minnesota," published in the first volume of the *Bulletins*, described 225 species, two of which he claimed were new to science. His labor in collecting ten thousand specimens, he wrote, had "not been small," and he listed with great zest the habitats he had searched, from prairies, woods, thickets, hills, and valleys, to lichens, decaying fungi, excrement of animals, and bodies of dead insects. Other observable fields explored by academy members included rocks, geological formations, weather, and — particularly during the 1870s — Indian mounds and prehistoric burial sites.

Professional papers, too, were welcomed by the academy. During its first two decades these included a variety of studies reflecting broad, often practical, professional interests. Dr. Hatch delivered several papers on Minnesota birds, the first of which was published by the academy in 1874. Geological contributions by Winchell, by Warren Upham, assistant state geologist, and by Frederick W. Sardeson, professor of paleontology at the university, appeared regularly. Other members of the university science faculty gave addresses on subjects ranging from astronomy to "Some Tests of Building Stones" and "The Utilization of Sawdust." Venturing into the field of social science, academy members in 1882 listened to a lecture on "The True Method of Political Economy," delivered by William W. Folwell, president of the university.[15]

SOME of the academy's studies were undertaken in direct response to community needs. As early as 1881 Professor George F. Weitbrecht, then identified with the St. Paul Medical College, discussed impurities in drinking water. He made a plea for better sanitary conditions to eliminate sources of water contamination. Two years later the academy established a section on sanitary science and resolved to investigate the Minneapolis water supply. Dr. Charles N. Hewitt, secretary of the state board of health, served as chairman of the section and head of the investigating group. After a chemical and biological analysis of the water

[13] Bates, *Scientific Societies*, 123; reports of the corresponding secretary, 1874, 1877; exchange list, 1887, Academy Papers.

[14] *Bulletins*, 3:314 (Minneapolis, 1889).

[15] *Bulletins*, 2:239–258, 281–289, 382–387.

supply and a detailed examination of the area surrounding its sources, the committee reported that both city water intakes were subject to contamination and recommended that water be drawn from a point farther up the Mississippi. No immediate action resulted and as late as 1908 Professor Hall read a paper on the "Water Supplies of the Twin Cities," indicating the academy's continuing interest in the problem.[16]

Education was another aspect of community life that concerned academy members. In his 1881 presidential address Winchell spoke on "The State and Higher Education." Industrial education and "Natural Sciences in the Public Schools" were discussed at different times by Professors William A. Pike of the university and Adolf F. Bechdolt of Mankato. During a two-month period in 1891, Hall, as secretary, corresponded with school principals and college professors in an effort to collect information on science education throughout the state.[17]

Perhaps this interest was stimulated by the obvious need for a broader public acquaintance with scientific attitudes and goals. Since the publication of Charles R. Darwin's *Origin of Species* in 1859, science had been shadowed with suspicion and had become the frequent object of attack by religious groups. Locally this attitude had been manifested in "repeated flings" directed at the academy by the press. From its very inception, wrote Dr. Hatch in 1881, the organization had been attacked as "a hotbed of infidelity, and the lair of all anti-religious, anti-Bible, anti-Christ isms of the age."[18]

An effort to counter these accusations had been made in 1873 by Dr. Johnson, who held strong views on the matter. In his first presidential address he posed the question "Did Life Originate by Law?" and argued forcefully that the scientific attitude did not conflict with religion.[19] Nevertheless, in 1876 when the academy sponsored a series of lectures on astronomy by Professor Richard A. Proctor, public criticism was so strong that the society felt compelled to send the professor a formal apology for the mortification he had suffered while in Minneapolis. His scholarly interpretation, maintained the academy, should lead his critics to a more "permanent love and veneration for their Creator."[20]

Undaunted by continuing suspicion, which Hatch compared to an iceberg that took "all the solar heat of the vernal months to melt down," the members in 1883 voted a resolution expressing their sense of loss at Darwin's death and their "profound admiration of his scientific labors."[21]

Meanwhile membership grew steadily among the more enlightened elements of the community, and the organization drew support from several of Minnesota's leading citizens. Thomas Lowry had joined the academy in its first year, and in 1879 Charles A. Pillsbury and Thomas B. Walker both became members. A few women also joined. Mrs. George W. Tinsley, the wife of a member, was admitted in 1876 in recognition of her skill at mounting bird skins; in 1888 a Gertrude Leonard was elected corresponding secretary; and three years later Bertha Wilson, a teacher at North Side High School in Minneapolis, joined the group. In 1889 the membership stood at sixty-one, and it continued to increase with a measure of regularity throughout the academy's first two decades despite the five-dollar annual fee, which was a considerable sum for the time.[22]

The organization recognized that the establishment of a museum and scientific library would call for substantial and permanent housing. The first of many moves took place in 1875, when the academy transferred

[16] *Bulletins*, 2:62–65; 3:4, 10, 38–44; 4:339.

[17] *Bulletins*, 2:45–62, 65–71, 259–275. Hall's correspondence with Minnesota educational institutions was carried on in March and April, 1891. It is in the Academy Papers.

[18] Hatch, in *Bulletins*, 2:42.

[19] *Bulletins*, 1:39.

[20] "Resolutions in Regard to Professor Proctor," 1876, in Academy Papers.

[21] Hatch, in *Bulletins*, 2:40; *Bulletins*, 2:386.

[22] Record Book of Members and Their Payments, 1:80, 111, 147; Secretary's Minute Book, 1878–1911, p. 187, Academy Papers; *Bulletins*, 3:311; Gale, in *Bulletins*, 4:435.

its collections from Dr. Johnson's office to a "narrow, stuffy" back room on the second floor of a building at 214 Nicollet Avenue. It was hoped that the new and more central location, where the rent was $120 a year, would attract a greater number of visitors and provide the academy with "a larger field of usefulness in the community." In 1881, however, the scientists left these quarters, and after a transitional year in the Wensinger Block, the library, museum, and furniture were moved to the third floor of a building at 110 Hennepin Avenue.[23]

Academy leaders continued to look forward to an adequate and permanent location. To this end, Thomas Walker and Samuel C. Gale in 1884 headed a committee to secure a building that would serve not only the academy, but the Minneapolis Athenaeum and the Minneapolis Society of Fine Arts. Nothing came of this proposal, however, and without funds to support the development of more elaborate plans, the academy continued to use the Hennepin Avenue rooms until 1889, when the board of the Minneapolis Public Library offered the scientists space in the new library building.[24]

These quarters were no doubt provided through the influence of Walker, who had worked hard for the construction of the building. They were enjoyed more or less on suffrance; nevertheless the offer was fortuitous. The academy was at the time two years in arrears on its rental for the Hennepin Avenue location — a debt which was cleared only through contributions by several staunch members and a few partial payments toward life memberships.[25]

MINNEAPOLIS *Public Library in the 1890s*

THE MOVE to the library building seemed to herald a new era. With the housing problem thus solved, the leaders of the group hoped that henceforward the academy would be able "to devote its energies more directly to the publication of its *Bulletins* and to the creation of a museum of natural history and material resources for the great Northwest."[26] What course the organization would have taken had it not seized the "golden opportunity" which presented itself the following year can be only a matter of speculation.

On April 8, 1890, Horace V. Winchell called the members' attention to a scientific expedition proposed by Dean C. Worcester and Frank Bourns, both from the University of Michigan, who planned a two-year collecting trip to the Philippine Islands. He urged the academy to support the venture, pointing out that it might thus share in the collections acquired. The society's president forthwith appointed a committee to canvass for subscriptions to aid the expedition.[27]

The results were prompt and startling. On June 26, 1890, a letter from Louis F. Menage, who had been elected to membership only two weeks before, was read to the academy's board of trustees. Menage, a real estate man and president of the Northwestern Guaranty Loan Company, offered ten thousand dollars

[23] Hall, "The Place of the Academy of Sciences."
[24] Hall, "The Place of the Academy of Sciences"; Gale, in *Bulletins*, 4:439.
[25] Treasurer's Book, 1889, p. 31; Minutes of the Minneapolis Public Library Board, October 19, 1889 (copy), Academy Papers; Gale, in *Bulletins*, 4:439.
[26] *Bulletins*, 3:187.
[27] *Bulletins*, 3:299, 301.

to support the Philippine expedition. He stipulated, however, that the academy "prepare and mount the collection as it arrives," and "assume the expense connected with said collection after its delivery." Further conditions were that the society secure the services of Worcester and Bourns to "properly work up, in Minneapolis, the scientific results" of the collection, which was to be labeled and kept on free exhibition. The materials collected, as well as articles received in exchange for duplicates were to "be known and designated as the 'Menage Collection.'" [28]

On July 21 the two scientist-explorers visited Minneapolis to meet the members of the academy and to present a summary of their plans. There was some debate on the requirement that the academy assume the expense of the scientists' services for mounting and labeling the collection, but Worcester explained that he and Bourns wished "to control the description of new species, more particularly birds, and did not intend to stay in Minneapolis more than a few months or a year." The Menage proposal was unanimously accepted, although some members apparently had reservations about it. [29]

THE NEW VENTURE had unquestionably enlisted the interest and support of Minneapolis businessmen. It carried with it, however, commitments far beyond anything the academy had before undertaken. In the difficult years that followed, the administrative burden entailed by the Menage Collection was largely borne by Christopher Hall, the organization's devoted secretary and editor. His initial faith in the enterprise was expressed in a letter to Hatch, then living on the West Coast: "I feel that . . . we shall before long see this organization occupying a large place in this community, or it will practically close up until another generation rises up to take its special work in hand. I have little apprehension for the latter alternative; I have too great confidence in the breadth of view of our Minneapolis business man." [30]

As expected, the specimens began to come from the Philippines the year after the arrival there of Worcester and Bourns. A taxidermist, James A. Hobson from Fort Worth, Texas, was hired by the academy at sixty-five dollars a month to prepare and mount them. Prompted by periodic reminders from Hall, Walker furnished a part of Hobson's salary for thirteen months, but payments were not always on time, and relations between the academy and the taxidermist were far from harmonious. Not until some months after his employment had ended did the society finally settle its debt to him. [31]

The growing Menage Collection increased the need for a museum curator as well, but the public library board refused the academy's request to supply one. New display cases were also constantly required. In July Hall expressed the hope that with the resumption of activities in the fall there would be "some enthusiastic giving to the academy for the development of its Museum. If not, *Debt*!" [32]

The hope was not borne out, but Hall still seemed sanguine in December when he wrote to Worcester that "Hobson is mounting a snake skin which measures 24 feet and 9 inches in length, a monstrous creature. I know of nothing equal to it in the United States. . . . Over one hundred and forty packages have reached us and Mr. Menage tells me one or more consignments are on their way. We had a fine assortment of corals cleaned up and taken over to the Public Library Building. Two loads of birds have

[28] Menage to Hall, June 26, 1890, Academy Papers; *Bulletins*, 3:300.

[29] *Bulletins*, 3:302; Hall to Menage, July 30, 1897 (copy), Academy Papers.

[30] Hall to Hatch, December 22, 1892 (copy), Academy Papers.

[31] Hobson to Academy, January 15, 1892; James I. Best, Attorney, to Hall, October 12, 1893; Hall to Walker, March 31, 1893 (copy), Academy Papers.

[32] Minutes of the library board, April 5, 1892, in the archives of the Minneapolis Public Library; Hall to William H. Pratt, July 22, 1892 (copy), Academy Papers.

gone over and several more will probably be in place on your arrival." Yet in response to Worcester's request for a statement regarding the proposed salaries for himself and Bourns during their stay in Minneapolis, Hall was forced to write that nothing had been decided, although "the question must be faced before long." On January 17, 1893, he reported that there had still been no quorum to decide the matter of salaries. He was, however, "very optimistic about the future work of the Academy," and hoped "to have everything arranged financially so that you can come and begin your work under auspices so favorable that you will feel no hindrance whatever." [33]

Hall's optimism was shattered by the disastrous events of 1893. As a result of the panic and business depression of that year, the Northwestern Guaranty Loan Company went into receivership, and Menage left town under indictment for larceny (a charge later rescinded). "I have not known a time when it is so difficult to get money as now," Hall wrote to Worcester. "The friends on whom we relied for help are in dire financial distress." Hall himself had been paying some of the academy's bills, but as the summer progressed, his money became tied up in the suspended Commercial Bank.[34]

One expedient after another was suggested for raising money, but each was eventually discarded as impractical. By the end of the year it was clear that the academy could not meet its commitment to Worcester and Bourns. An additional burden imposed by Menage's financial failure was the accumulation of heavy transportation and warehousing costs on the specimens still being shipped — an expense which the academy itself was forced to meet in order to keep the collection intact. Funds were borrowed for this purpose.[35]

Hall's explanations to Worcester brought a series of insulting replies in which the young scientist used terms that Hall hoped "he may live to regret." Despite the bad feeling, however, Worcester appeared in Minneapolis the following April — no doubt

BOURNS *and a guide, Island of Palawan*

to determine at first hand what could be done about the collection. At a well-attended meeting of the academy he related some of his experiences in the Philippines, and before he left the city it was agreed that yet another solicitation would be undertaken.[36]

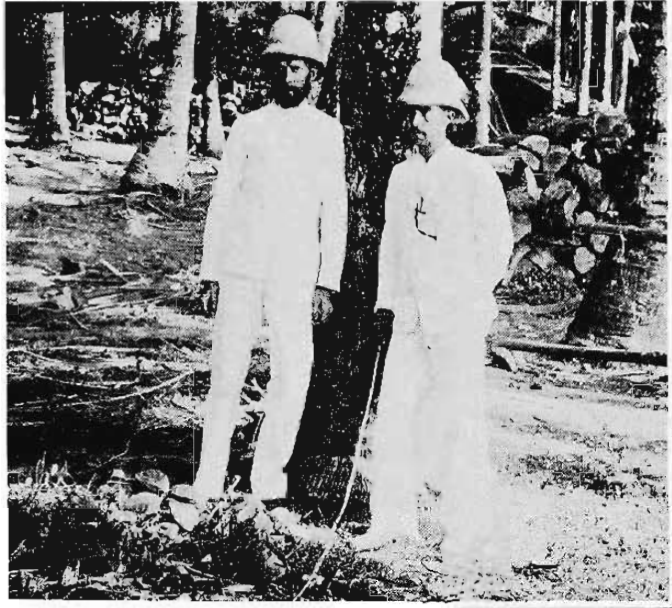
Perhaps because of the enthusiasm generated by Worcester's talk, this effort proved more successful than previous ones, and by June 8 a total of $1,500 had been subscribed — a sum that would allow the two Michigan scientists to "properly work up" the collection. The amount of $800 was paid to them in 1894, and an additional $210 the following

[33] Hall to Worcester, December 10, 1892; January 17, 1893 (copies), Academy Papers.

[34] Hall to Worcester, June 7, 1893 (copy); to Henry L. Osborn, August 22, 1893 (copy), Academy Papers.

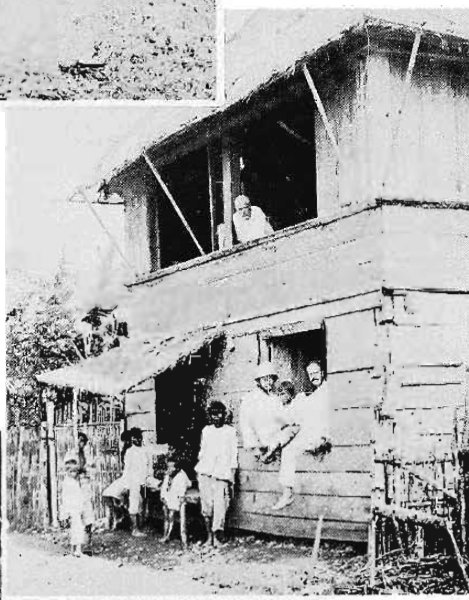
[35] Hall to Walker, July 31, 1893 (copy); to Osborn, November 13, 1893 (copy); to James R. McGolrick, February [?], 1894 (copy), Academy Papers; *Bulletins*, 4:30–32.

[36] Hall to Pratt, August 9, 1893 (copy), Academy Papers; *Bulletins*, 4:43, 44.



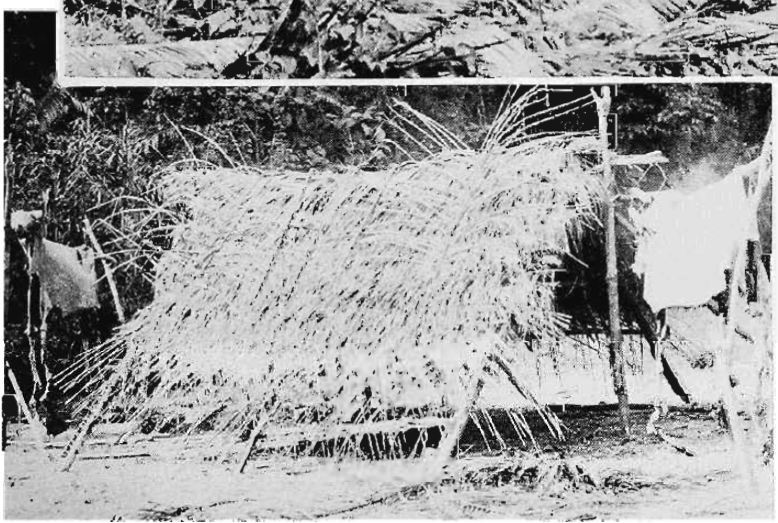
DEAN *Worcester and Frank Bourns*

THESE *pictures, reprinted through the courtesy of the Minneapolis Public Library, were taken in the Philippine Islands during the Menage expedition of the 1890s.*



THE *expedition's first collecting station, Island of Luzon*

NATIVES *displaying a python skin*



DRYING *specimens for the Menage collection*

year carried a notation in the treasurer's book, "Bourns and Worcester *in full.*" [37]

Another important step achieved in 1894 was the publication of "Letters from the Menage Scientific Expedition" in the academy's *Bulletins* and the initiation of a new series entitled *Occasional Papers*, of which "Preliminary Notes on the Birds and Mammals Collected by the Menage Scientific Expedition to the Philippine Islands" constituted volume 1, number 1. Despite Hall's earnest hopes, the series terminated there. It served the purpose, however, of bringing the collection to the attention of the scientific world — a step which resulted in numerous profitable exchanges and sales of duplicate specimens. Dealings with the Field Columbian Museum in Chicago brought a welcome $262 in cash and later another payment of $150. Similar sales were made elsewhere.[38]

With United States acquisition of the Philippine Islands in December, 1898, the Menage Collection became almost overnight an item of considerable public interest. The managers of the Greater America Exposition held in Omaha, Nebraska, in 1899 offered to clean, mount, and prepare materials from the collection in exchange for permission to display them. Expenses to the amount of $1,750 were allowed for the work, and the exposition authorities agreed to handle all costs of packing and cartage. Gratefully, the academy accepted.[39]

When the specimens returned to Minneapolis they were placed on exhibit in the public library, which began to look upon the museum as an asset. An admission fee of ten cents for adults and five cents for children was charged, and during the first nine weeks $358.85 was collected, enabling the academy at last to pay a curator.[40] Public interest was no doubt further stimulated in February, 1900, when Dean Worcester was named a member of the Taft Commission, appointed by President William McKinley to govern the Philippines.

ALTHOUGH after long struggle the Menage venture seemingly ended in success, the academy's decline began during these ten years. The membership fee was reduced to three dollars for local residents, but as Hall reported in 1897, "people are not falling over each other in their zeal to identify themselves with the organization." [41] The continuing financial commitments had made it necessary for the group to rely more and more upon the interest of businessmen. Administrative cares had drained the energy which Hall and others might have spent on reshaping the academy's purpose to meet more closely the needs of Minnesota's burgeoning scientific community.

Deeply involved as he was in the organization's day-to-day problems, Hall appealed once more to his old friend Philo Hatch. "Fifteen years ago," he wrote in 1897, "I was sanguine over the prospects of the Academy and I know you were too. . . . What is the matter? If you, a few thousand miles away, can see the real inwardness and outwardness of the situation and would tell me, I would consider it one of the greatest favors you could bestow." [42]

What Hall failed to perceive was that the "actual workers" referred to by the Smithsonian's Joseph Henry in 1873 were no longer too few to allow the academy to pursue the "increase" of knowledge. During the 1890s the university's enrollment had trebled, and its growing faculty included a substantial number of professional scientists. Private colleges and government bureaus in the area had similarly expanded. Throughout the country, however, the newer scientists were moving toward specialization in

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[37] Board of Trustees Record Book, 1873–1897, p. 143; Treasurer's Book, 1894, p. 40, and 1895, p. 42, Academy Papers.

[38] *Bulletins*, 4:131–172; Hall to Thomas S. Roberts, April 6, 1898 (copy); Treasurer's Book, 1895, p. 43, Academy Papers.

[39] A copy of the contract is among the Academy Papers.

[40] *Minneapolis Journal*, June 12, 1902; *Bulletins*, 4:221.

[41] Hall to Adolphus F. Elliot, July 23, 1897 (copy), Academy Papers.

[42] Hall to Hatch, July 30, 1897 (copy), Academy Papers.

particular fields and were joining specialized societies affiliated with national groups of similar interests. Except among amateurs, the day of the "generalist" was rapidly passing.[43]

In addition, the academy never linked itself with a national scientific organization that might have supplied needed strength and flexibility. When the American Association for the Advancement of Science revised its constitution in 1899 to provide for affiliation of local groups, the event went unrecorded in the proceedings of the Minnesota society.[44] The academy leaders continued their single-handed effort to build interest in the organization. It was a losing game, but they played it to the end.

In 1901 the bylaws were revised to bring the sections of the society into a more workable list of seven: astronomy and mathematics, botany, geology, mineralogy, physics, zoology, and chemistry. Three years later annual dues were reduced from three dollars to one dollar, and in 1906 the members voted to change the organization's name to "Minnesota Academy of Science." Lectures, intended to arouse public interest, were revived, and during this period a committee was appointed to "seek recognition and financial aid from the State Legislature." In May, 1907, it was reported, however, "that the committee for the re-incorporation of the Academy as a state institution had met with such legal obstruction that the project had to be abandoned." [45]

A retrospective meeting held in January, 1906, revealed the true condition of the organization. It brought out the "old guard" — fifteen in all — and produced a historical address by Harlow C. Gale, who extolled the virtues of an amateur love of science and decried the modern tendency toward professional pride. Lastly it elected Walker president. Twenty years earlier, in 1885, Professor Washburn had cautioned against this step, saying "I think it would be unwise to make Walker an officer of the Academy. As a friend he will continue to be helpful, but as an officer he might not always be present." [46] The words were prophetic. Although Walker served as president until his death in 1928 and continued to aid the academy financially, he spent much of his time during those twenty-two years abroad and in California.

After 1910 academy activities practically ceased, although in 1914 the organization published a collection of papers read as a memorial to Newton Winchell, who died that year. There was no further publishing until 1917, when the academy issued the respected geologist's last address, "The Antiquity of Man in America Compared With Europe," a paper Winchell had read before the Iowa Academy of Science in April, 1914. The two pieces were brought out as academy *Bulletins*, volume 5, numbers 2 and 3.

Despite its lack of vitality, the group still looked forward to the time when it would have its own building and all its problems would be solved. Periodic encouragement from Walker kept hope alive, but the windfall never came. As late as 1926 Professor Frederick J. Wulling, then serving as vice-president of the defunct organization, was still urging upon Walker the resurrection of the academy. A note from the aged financier dated about a year before his death reveals an old man, harassed by unreasonable expectations and lacking the energy to meet them. Even after Walker's death, members of the academy were aggrieved. "He had promised me unconditionally," wrote Wulling, "that he would provide space in his new gallery for the Academy museum. . . . To my great surprise and disappointment, the building was almost completely filled with Mr. Walker's art objects and when I inquired where the Academy property would be exhibited, he explained that his intentions had been good, but that the bulk of his other

[43] William W. Folwell, *A History of Minnesota*, 3:254 (St. Paul, 1926); Bates, *Scientific Societies*, 85.

[44] Bates, *Scientific Societies*, 126.

[45] *Bulletins*, 4:234, 251, 258, 324, 331, 333.

[46] *Bulletins*, 4:321; Washburn to Hall, December 22, 1885, Academy Papers.

art works required all the space in the building except the basement." [47]

The property of the academy posed a continuing problem in the years after 1910. Its library had grown to such proportions that by 1907 Professor Oscar W. Oestlund of the university's zoology department appealed to the group to move its books from his laboratory or he himself "would have to move out." The members decided to place part of the collection in the museum space at the library. Finally in 1910 an agreement was reached allowing circulation and reference use of selected materials under the care of the library staff. Despite this, however, the academy never succeeded in bringing together under one roof its entire valuable collection of scientific journals. As late as 1928 Professor Oestlund was still complaining of the "condition of the extensive library, most of which was boxed up at the Public Library or at the University Zoology Building." [48]

The Minneapolis Public Library continued to care for the museum until 1926, when its board decided that some settlement of the situation must be reached. In a letter to Professor Wulling, Gratia Countryman, head librarian, urged that the academy reorganize and assume responsibility for its own museum. She pointed out that there was still considerable interest in the exhibits and that they were an effective means for "the popularizing of science." Nothing was done until after Walker's death two years later. Then Wulling, as acting president, wrote Miss Countryman that "there is no doubt in my mind that we can restore the Academy to its former usefulness." When he called a meeting on November 13, 1928, however, he found the names of only ten members in the secretary's file. The minutes of that final meeting state that the academy conveyed "its rights and properties now in the Public Library Building of Minneapolis to the Library Board of said city." The organization was then officially dissolved.[49]

On January 30, 1930, a reminiscent note was sounded for those Minnesotans who recalled the challenge and excitement of this early venture toward the frontiers of knowledge. The *Minneapolis Journal* announced the library's gift of a thousand Philippine bird specimens to the Smithsonian Institution. They were duplicates of those on display in the museum and had been packed away in "dusty boxes" for more than a quarter of a century.

[47] *Bulletins*, 4:320; Walker to Wulling, January 6, 1927; Wulling to Harlow C. Gale, October 27, 1928 (copy), Academy Papers. The "new building" referred to was the predecessor of the present Walker Art Center, erected by the Walker Foundation in 1940.

[48] *Bulletins*, 4:330; Minutes of the library board, June 2, 1910 (copy); "Proceedings," November 13, 1928, Academy Papers.

[49] Miss Countryman to Wulling, September 20, 1926; Wulling to Miss Countryman, September 13, 1928 (copy); "Proceedings," November 13, 1928, Academy Papers. In 1932 the present Minnesota Academy of Science was organized as an affiliate of the American Association for the Advancement of Science. It has no organizational link with the earlier academy.

THE PICTURE on page 113 is from the University of Minnesota Archives, and the one on page 116 is from the Minnesota Historical Society's collection.