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THE CHICAGO ACADEMY OF SCIENCES.

BY C. H. GORDON, EVANSTON, ILL.

THE arrangements recently completed whereby the Chicago Academy of Sciences receives from Mathew Laflin of Chicago $75,000 for the construction of a building at Lincoln Park, revives interest in an association formerly among the foremost of similar associations in this country. In giving a brief résumé of the history of the Academy, the treatment will naturally follow the order suggested by its financial experiences, as follows: (1) period of organization and early struggle — 1856–64; (2) prosperity — 1864–81; (3) decline — 1881–91; (4) revival — 1891.

1. *Organization.* The Chicago Academy of Natural Sciences, as it was at first termed, was established in 1856, chiefly through the efforts of Robert Kennicott, then a young man of indomitable perseverance and rare scientific attainments. There were fourteen charter members as follows: J. B. Blaney, M.D., N. S. Davis, M.D., J. W. Freer, M.D., C. Helmuth, M.D., E. W. Andrews, M.D., H. A. Johnson, M.D., H. Parker, M.D., F. Scammon, M.D., Robert Kennicott, George A. Mariner, Samuel Stone, R. K. Swift, J. D. Webster, H. W. Zimmerman. The energy, loyalty, and ability of these men, some of whom are still active in the affairs of the Academy, gave the impetus which contributed largely to the success attending it in subsequent years. Steps were taken very early to establish a museum, and rooms were secured in what was then known as Dearborn Seminary on Wabash Avenue, north of Washington Street. Subscriptions to the amount of $1,500 were obtained, and Robert Kennicott, who had contributed his fine collection of zoölogical specimens, was installed as Director. Contributions were also made by Dr. Andrews and others until many thousand specimens were accumulated.

The financial crash of 1857 ruined most of the subscribers to the original fund, and left the Academy nearly destitute of means for meeting its necessary expenses. In 1859 it was incorporated under the laws of Illinois and its name changed to its present form. The Civil War breaking out soon afterwards completely absorbed public attention, and took from its ranks the more active members for service in the army. Deprived of public attention, destitute of money, and stripped of working members, the whole enterprise seemed likely to be extinguished.

In 1859, Robert Kennicott departed for Arctic America in charge of an exploring expedition under the auspices of the Smithsonian Institution. He returned from Alaska in 1862, richly laden with specimens in all departments of natural history. The results of this exploration were considered to be second to no other similar expedition on record. As the expenses of the expedition were borne by the Smithsonian Institution, the collections all went to Washington with the understanding, however, that a full series of the specimens was to be presented to any institution, otherwise eligible to such donation, that Mr. Kennicott might designate, provided suitable provisions were made for their reception and preservation. Naturally, Mr. Kennicott designated the Chicago Academy of Sciences as the recipient of such donation. During the year 1863 the collections were studied and arranged, and early in 1864 word was received stating that the duplicate series awaited the action of the Academy.

2. *Period of Prosperity.* The opportunity thus offered was eagerly seized by the active spirits remaining, and steps taken to secure the requisite funds. On Feb. 22, 1864, an informal meeting of interested gentlemen was held, at which Professor Agassiz, who was opportunely visiting Chicago, was present. Professor Agassiz testified to the great value of the collection and gave added impulse to the movement.

A reorganization of the Academy followed, and a corresponding act of incorporation obtained in 1865. A change in the constitution was effected by which life memberships of $500 each were established. During the summer of 1864, an active canvass was made resulting in 125 subscribers to life-memberships, making a total of $62,500. Of this, $50,000 was to be held as a permanent endowment. The following year the collections were received and deposited temporarily in the Metropolitan Building, at the corner of Randolph and LaSalle Streets.

The selection of a lot and the erection of a building next engaged the attention of the Academy, and it was only after much effort and discussion that a location was decided upon; but finally in January, 1867, the trustees reported the purchase of a lot on Wabash Avenue, just north of VanBuren Street, and the construction of a fireproof building thereon soon after began. Here began the contention, sometimes characterized by good humor, sometimes by acrimony, and renewed from time to time through the following years between the Academy and its trustees. The cause of this contention lay in the constitution, which was defective in two points; first, in delegating to the trustees, a body of its own creation, sole authority in certain lines, thus depriving itself of supervision over the acts of its servants; and, second, of failure to define clearly the powers and limits of the two bodies. A dual government was thus inaugurated, destined to bring trouble and perplexity into the affairs of the Academy. The assets of the Academy at this time, as shown by the financial report, were $72,000, with an annual income of $6,500. In the meantime, however, it had suffered two irreparable losses. The first was in the death of Robert Kennicott, which occurred at Nulato, a Russian port on the Yukon river, May 13, 1866, while on a second expedition to the far north, which had been undertaken the previous summer. Following close upon this (June 7th) came a disastrous fire in the building containing the collections, by which a large portion were destroyed and the remainder badly damaged.

Notwithstanding these misfortunes, however, the years from 1864 to 1871 may be reckoned as the most prosperous years in the history of the Academy. Active investigations of much importance were being carried on in various lines, and the work of its active members attracted the attention of leading scientists throughout the country, many of whom were enrolled as corresponding members. In meteorology, observations were conducted under the special supervision of Dr. Joseph Henry of the Smithsonian Institution. The work in natural history, which had received special impetus from the labors of Robert Kennicott, was continued under the able leadership of Dr. Stimpson, and the growth of the museum was remarkable. The library was in constant receipt of books and the publications of scientific associations of all countries, while the papers presented to the Academy were of a high order of merit.

The Academy building was completed in 1867, and the associaciation immediately entered upon the publication of its proceedings, the first part of volume one being issued in 1868 and the second in 1870.

On the departure of Mr. Kennicott, in 1865, Dr. W. S. Stimpson, a young man of rare scholarship and excellent scientific attainments was called to act as director of the museum, to which duties were added those of the secretaryship. The Academy was especially fortunate in having at the helm in its early career two men of such eminent ability, energy, and devotion as Kennicott

and Stimpson. During these years Dr. Stimpson was actively engaged in investigations, the published results of which would have made his a well-known name among the scientists of the world.

In 1871 came the great fire destroying the Academy's building with all it contained, sweeping away all the results of Dr. Stimpson's life-work, as well as swallowing up in the general ruin the private fortunes of the most active supporters of the Academy. The loss of his papers was a severe blow to Dr. Stimpson, from which he never recovered. After the fire he was taken to Florida, where he died the following May.

At the beginning of 1872, the assets of the Academy, exclusive of the lot, were $23,000, $10,000 of which represented the insurance on the burned building. No money was available for building, but it was decided to borrow and erect on the lot two buildings, one for the museum and one for rental. The courage and hopefulness thus evinced was but a part of that characterizing Chicago after the fire, and, as in the case of many a private interest, the too sanguine view was but the prelude to further disaster. The buildings were completed in 1873, involving a financial burden of $80,000, afterward increased to $100,000.

In the general depression of business following the fire, the income of the Academy was insufficient to meet expenses and interest, until in 1881 the mortgage was foreclosed and the society was homeless.

During this time, however, the scientific work was carried forward with commendable zeal and success. The records show the interest to have been well sustained and the papers meritorious, while the museum prospered notwithstanding the financial stress.

3. *Decline.* Following the loss of the property, interest flagged, hope died out, and for ten years it became a bare struggle for existence. The museum building was retained by rental for two years, after which the collections were transferred to the Exposition Building, where they remained for several years under the care of the curator, J. W. Velie. The meetings were desultory and not well sustained. Two series of valuable bulletins were issued, however, during this period.

4. *Revival.*— In 1891 it was decided by the city authorities that the old Exposition Building should be removed. This revived the question of the disposition of the collections. A proposition involving its transfer to Chicago University was not favorably received by many of the members, when an opportune benefactor appeared in the person of Mathew Laflin, and settled its location at Lincoln Park. This agreement contains a provision by which the commissioners of the park are to add $25,000 toward the erection of the building and to bear all the running expenses, including salary of curator and assistants to an amount not exceeding $5,000 annually. The final arrangements were completed April 1, 1893, since which plans have been accepted and the construction will soon be under way.

Within these two years interest in the Academy has greatly revived, many new members have been enrolled, and active investigations set on foot along many different lines. Sections have been formed in astronomy, microscopy, chemistry, and other lines of work.

The disposal of the museum frees the Academy from a heavy burden, thus making the income available for publications which are to be renewed at once.

One of the enterprises now engaging the attention of the Academy is a geological and natural history survey of Chicago and vicinity. This will include the preparation of a topographic map of the area on a scale of about one and one-half inches to the mile, with contour intervals of five feet, and accompanying reports upon the geology, paleontology, zoölogy, botany, and archæology of the district. The work is in charge of a board of managers, and is being prosecuted as actively as possible. In the preparation of papers many noted scientists both in and out of Chicago are giving assistance.

In connection with this work the board has also undertaken the collection of views from all parts of Illinois and adjacent parts of Indiana, Michigan, and Wisconsin, illustrating interesting features of geology, topography, and other points of interest. These will be mounted, classified, and deposited in the Academy building, where they will be accessible to all who may wish to consult them.

The president of the Academy is Dr. S. H. Peabody, ex-president of Illinois University and superintendent of the Liberal Arts exhibit at the World's Fair. Dr. Peabody has been an active worker in the Academy for many years.

The present hopeful outlook for the society must be attributed in large measure to the untiring zeal and energy of its efficient secretary, Professor W. K. Higley. Among those identified with more or less of the history of the Academy the following are still among its loyal supporters: Dr. E. W. Andrews, G. C. Walker, E. W. Blatchford, B. W. Thomas, B. F. Culver, C. M. Higginson, Professor G. W. Hough, Dr. N. S. Davis, S. W. Burnham, S. H. Peabody, and others. Prominent in the past but no longer appearing on the active roll are the names of Professor M. Delafontaine, E. Colbert, J. D. Caton, Professor H. H. Babcock, ex-Gov. Wm. Bross, J. H. Rauch, J. W. Foster, and others.

IS IT A SCIENCE?

BY WILLIAM L. SCRUGGS, ATLANTA, GA.

IN the current discussions of international questions we often encounter the words commonwealth, state, and nation in the alternate form, as if they were synonymous and convertible terms. Now, a commonwealth may be a state or a nation, or both; a state or a nation may be a commonwealth. But the term nation implies the unity of a people of the same race, descent, and language under one government; whereas a state may be composed of people of diverse origin united under one government of whatever form; whilst a commonwealth is the unity of a people under a free or representative government.

Again, we have the commonly accepted statement that "states or nations are bodies politic or societies of men united together for the purpose of promoting their mutual safety and advantage by the joint efforts of their united strength." This is Vattel's definition, derived from Cicero. But states and nations are not equivalent terms, nor are "societies of men united together for the purpose of promoting their mutual safety and advantage" necessarily either "states or nations." The old Hudson Bay Company was such a "society of men united," but it was neither a nation, state, or commonwealth. Pirates and robbers are so united, but they have none of the essential elements of statehood. The political bodies corporate in the United States, the people of which constitute our national government, are literally within Vattel's definition; but they are neither "states" nor "nations" in the strict legal sense. They have a local police system or automatic government, but none of the elements of sovereignty or nationality. The very form of their local autonomy is prescribed by a superior power; they can have no diplomatic relations even between themselves, much less with foreign powers; they cannot declare war or enter into public treaties; they cannot establish post-offices and post-roads; they cannot levy and collect import duties; their very local legislation must conform to that of an external and paramount authority; and their citizens are such only by reason of the fact that they are citizens of the United States. Hence, so far from being "sovereign," these political bodies corporate are not even "states" in any just sense. They would be more properly denominated dependencies, provinces, or commonwealths.

Again, conforming to custom, we are in the habit of speaking of "the law of nations," when it is manifest there is no such thing. Law is a rule of conduct prescribed by some superior power able to enforce obedience. But sovereign states acknowledge no superior; all are equal. They recognize no common paramount authority; nor have they established any common magistracy to interpret and apply rules for the regulation of their reciprocal relations. They have no common code illustrated by judicial decisions. True, there is an established *usage* or custom in the intercourse of nations which by common consent has the moral force of law; the real meaning of which is, that there are certain forms of public *opinion* which nations, no less than individuals, cannot very well afford to disregard, although the duties thus imposed are enforced by moral sanction only. The old