
CHAPTER III

The Founding and Early History of the Marine Biological Laboratory

I. EARLY STRUGGLES: 1886-97

*T*HE first step in the foundation of the Marine Biological Laboratory was taken by the Woman's Education Association in accordance with their decision to replace the Annisquam Laboratory by an independent and permanent institution, as mentioned in the last chapter. In 1886 the Association addressed a circular letter to many of the leading biologists of the country and, receiving favorable replies, issued an invitation to a preliminary meeting on March 5, 1887, at the Boston Society of Natural History. This meeting, attended by twenty-two persons, including representatives of the Woman's Education Association and of the Boston Society of Natural History and professors from Harvard University, the Massachusetts Institute of Technology, and Williams College, with singular unanimity and vigor started the movement on its way to success.

A committee of twelve members was appointed by the meeting "to perfect plans for the organization of a permanent sea-side laboratory, to elect trustees and to devise ways and means for collecting the necessary funds." The committee promptly decided that the new laboratory should combine research and instruction, and they appointed seven trustees. An appeal for funds was issued, and a course of lectures on natural history was arranged for the winter of 1887-88. Mr. Charles B. Cory wrote and supervised an original operetta from which a considerable sum was realized, and an additional appeal in the spring of 1888 brought funds of an amount sufficient for a modest beginning. Accordingly, the laboratory was incorporated in March, 1888, in the commonwealth of Massachusetts under the name of the "Marine Biological Laboratory" (III, A, 1; A, 2). The following officers of the corporation were chosen, and Professor Alpheus Hyatt was elected the first president and Miss Anna D. Phillips the first secretary:

TRUSTEES

WILLIAM G. FARLOW
EDWARD G. GARDINER
ALPHEUS HYATT

SUSAN MINNS
CHARLES S. MINOT
WILLIAM T. SEDGWICK

SAMUEL WELLS

TREASURER

WILLIAM STANFORD STEVENS

CLERK

ANNA D. PHILLIPS

The sum actually raised by these efforts amounted to about \$10,000. The subscriptions from eighty-three contributors, including \$800 from the Woman's Education Association, amounted to \$7,909.50; the lectures brought in \$1,485.61, the operetta \$431.50, and Mrs. H. D. Wilmarth contributed \$100 for the library-to-be. The financial beginnings were small; but faith and hope were high and broadly based in the Massachusetts community, to whom the founding of the Marine Biological Laboratory is to be exclusively credited.

Woods Hole was quickly selected as the site; a piece of land, 78 × 120 feet, was purchased in close proximity to the fisheries station; Professor C. O. Whitman was appointed the first director; and B. H. Van Vleck, instructor. It was decided to begin construction at once and to open the Laboratory in the summer of 1888. A frame-shingled building, 63 × 28 feet, was quickly erected and equipped and was opened for work on July 17, 1888. The Woman's Education Association presented the glassware, boats, furniture, fixtures, and apparatus of the Annisquam Laboratory. The first announcement was not sent out until some time in June (III, A, 3), and the attendance at the first session of the Laboratory was accordingly small—seven investigators and eight students, in addition to the director and instructor.

It was the intention of the first Board of Trustees that the institution should not be simply local in its character but should enlist the active interest and support of the universities and colleges of the country. As evidence of this intention, a circular was prepared in June, 1888, addressed to colleges, which contained the following significant statements:

The Trustees of the Marine Biological Laboratory earnestly desire to enlist your co-operation in the support of a sea-side laboratory for instruction and investigation in Biology.

It is the desire of the Trustees that the enterprise shall enlist the active support of

the universities and colleges of the country. To prevent its becoming a simply local undertaking, they wish to see all who aid in its support by subscribing to investigators' tables share with the other members of the Corporation in the annual election of Trustees. The Trustees will, therefore, invite each institution which holds an investigators' table to name five persons for members of the Corporation during the term of subscription. The fee for membership in the Corporation has been put at the nominal sum of one dollar a year.

The circular was not widely distributed, and the immediate response was small. However, the intention was later so ably seconded by the first director that co-operation of universities and colleges grew rapidly, though without the privilege of naming members of the corporation, as originally intended; and the national character of the institution was thus assured. This movement of the Laboratory came early enough to avoid the multiplication of relatively small institutional laboratories on the eastern coast to an undesirable extent. It was due to this policy that the Marine Biological Laboratory gradually came to represent over one hundred and fifty institutions each year and that over eighty of them co-operated by subscriptions for the use of facilities (p. 94).

In Professor Whitman the trustees had found a man not only fitted to carry out their purposes but possessing imagination adequate to transform their shadowy ideas, the zeal and determination required to give them form and substance, and the courage to face whatever difficulties might arise. He had an ideal preparation. As student at Penikese in both sessions, he had the benefit of Louis Agassiz's inspiration in 1873 and further training in marine biology in 1874. He studied with the famous zoölogist Leuckart in Leipzig from 1875 to 1878, and received his Ph.D. degree there; for two years he was professor of zoölogy in the University of Tokyo; and on his way back to America he visited Naples and worked for six months (1881-82) at the Zoölogical Station, as guest of the director, Anton Dohrn. Next he was assistant at the Museum of Comparative Zoölogy at Harvard under Alexander Agassiz (1882-86). Following this, he acted as director of the Lake Laboratory at Milwaukee, Wisconsin, founded by Edward Phelps Allis, Jr.; and, while there, he established the *Journal of Morphology*, which set a new standard of excellence for zoölogical publications in America. His appointment as professor of zoölogy at the new research university at Worcester, Massachusetts, founded by Jonas Clark, practically coincided with his appointment at Woods Hole. He had come under the influence of three of the greatest zoölogists of the time, Agassiz, Leuckart, and

Dohrn; was intimately acquainted with the work of the two most important marine laboratories, Penikese and Naples; and at forty-five years of age was full of energy and directed enthusiasm. He was also to prove a wise and inspiring leader.¹

Professor Whitman clearly outlined his ideas and hopes for the new institution in his opening address (first annual report) and developed them more fully during the next few years (III, 14, 19–24). The all-important requisite in Professor Whitman's opinion was an organized corps of investigators, to be realized in the composition of the Board of Trustees and the membership of the corporation and in the staff and other workers at the Laboratory. The organization should be a national one, uniting universities and colleges in a single endeavor. Research should be the dominant function, but instruction of competent students should be maintained. All biological interests, not only marine, should be welcomed. Progress of science should be the primary consideration; and the economic aspects of biology—for instance, fisheries research—should be regarded as of secondary importance. The control and government of the Laboratory should remain in the hands of professional biologists. The aim was to develop an ideal biological station and a great center of biological research.

Whitman was the person most influential in determining aims and policies. He sought advice and encouragement not only from American biologists but also, by correspondence, from European leaders, among whom may be mentioned Carl Vogt, T. H. Huxley, Anton Dohrn, August Weismann, Rudolph Leuckart, Ernst Haeckel, and E. Ray Lankester. It was encouragement, rather than advice, that he sought (III, 20).

The following quotations from Whitman's early writings will serve to illustrate his ideas. In his first annual report, for 1888, he wrote:

The new Laboratory at Woods Hole is nothing more, and, I trust, nothing less, than a first step towards the establishment of an ideal biological station, organized on a basis broad enough to represent all important features of the several types of laboratories hitherto known in Europe and America. It should be provided eventually with means for sending men to different points of the coast to undertake the investigation of subjects of special interest, thus adding to the advantages of a fixed station those of an itinerant laboratory.

The research department should furnish just the elements required for the organization of a thoroughly efficient department of instruction. Other things being equal, the investigator is always the best instructor. The highest grade of instruction in any

¹ For a photograph of Professor Whitman at an only slightly later period (1893), the reader may refer to the group photograph on p. 90.

science can only be furnished by one who is thoroughly imbued with the scientific spirit, and who is actually engaged in original work. Whence the propriety—and, I may say, the necessity—of linking the function of instruction with that of investigation. The advantages of so doing are not by any means confined to one side. Teaching is beneficial to the investigator, and the highest powers of acquisition are never reached where the faculty of imparting is neglected. Teaching is an art twice blest; it blesseth him that gives and him that takes. To limit the work of the Laboratory to teaching would be a most serious mistake; and to exclude teaching would shut out the possibilities of the highest development. The combination of the two functions in mutually stimulating relations is a feature of the Laboratory to be strongly recommended [III, 14].

In his lecture on “Specialization and Organization” (1890) he remarked:

Among the ways of bringing together our scattered forces into something like organic union, the most important, and the most urgent at this moment, is that of a national marine biological station. Such an establishment, with a strong endowment, is unquestionably the great desideratum of American biology. There is no other means that would bring together so large a number of the leading naturalists of the country, and at the same time place them in such intimate helpful relations to one another. The larger the number of specialists working together, the more completely is the organized whole represented, and the greater and the more numerous the mutual advantages [III, 19].

In 1893 he wrote, in his lecture on “The Work and Aims of the Marine Biological Laboratory”:

To those who by word and example have encouraged co-operation, this record will certainly be gratifying; and perhaps it will be accepted by all as an assurance that good-will and united effort have not been fruitless. For six years the Marine Biological Laboratory has stood for the first and the only co-operative organization in the interest of Marine Biology in America [III, 22].

The same year he remarked, in his article “A Marine Observatory the Prime Need of American Biologists”:

The Marine Biological Laboratory attaches itself to no single institution, but holds itself rigidly to the impartial function of serving all on the same terms. It depends not upon one faculty for its staff of instructors, but seeks the best men it can find among the higher institutions of the land. The board of trustees is a growing body, every year adding to its number, until it now comprises a very large proportion of the leading biologists of America. The whole policy is national in spirit and scope. The laboratory exists in the interest of biology at large, and not to nurse the prestige of any university or the pride of individual pretension.

Representative character, devotion to biology at large, independent government,—such are the essential elements of a strong and progressive organization [III, 21].

Again (1896–97) he returned to the theme in an article entitled “Some of the Functions and Features of a Biological Station”:

It now remains to briefly sketch the general character and to emphasize some of the leading features to be represented in a biological station.

The first requisite is capacity for growth in all directions consistent with the symmetrical development of biology as a whole. The second requisite is the union of the two functions, research and instruction, in such relations as will best hold the work and the workers in the natural co-ordination essential to scientific progress and to individual development. It is on this basis that I would construct the ideal and test every practical issue.

A scheme that excludes all limitations except such as nature prescribes is just broad enough to take in the science, and that does not strike me as at all extravagant or even as exceeding by a hair's breadth the essentials. Whoever feels it an advantage to be fettered by self-imposed limitations will part company with us here. If any one is troubled with the question: Of what use is an ideal too large to be realized? I will answer at once. It is the merit of this ideal that it can be realized just as every sound ideal can be realized, only by gradual growth. An ideal that could be realized all at once would exclude growth and leave nothing to be done but to work on in grooves. That is precisely the danger we are seeking to avoid.

The two fundamental requisites which I have just defined scarcely need any amplification. Their implications, however, are far-reaching, and I may, therefore, point out a little more explicitly what is involved. I have made use of the term “biological station” in preference to those in more common use, for the reason that my ideal rejects every artificial limitation that might check growth or force a one-sided development. I have in mind, then, not a station devoted exclusively to zoölogy, or exclusively to botany, or exclusively to physiology; not a station limited to the study of marine plants and animals; not a lacustral station dealing only with land and fresh-water faunas and floras; not a station limited to experimental work, but a genuine biological station, embracing all these important divisions, absolutely free of every artificial restriction.

Now, that is a scheme that can grow just as fast as biology grows, and I am of the opinion that nothing short of it could ever adequately represent a national center of instruction and research in biology. Vast as the scheme is, at least in its possibilities, it is a true germ, all the principal parts of which could be realized in respectable beginnings in a very few years and at no enormous expense. With scarcely anything beyond our hands to work with, we have already succeeded in getting zoölogy and botany well started at Woods Hole, and physiology is ready to follow [III, 23].

How these ideas were implemented and developed is the story of the Marine Biological Laboratory. But first we have to relate the history of early struggles centered around the rapid growth of the Laboratory, which involved immediately not only increase of operating expense but also new building, acquisition of more land, adequate living accommodations, and important improvements in facilities for work. The need of a separate lecture-room was acutely felt in the second season; the growth of the library demanded separate space; and addi-

tional accommodations for the growing corps of investigators were urgently needed. Accordingly, an ell was added to the original building for use in the third session (1890). This still proving inadequate, a building the size of the original one and forming a third side of a quadrangle, was added in the spring of 1892 to accommodate classes in general physiology and botany on the first floor and the growing flood of investigators on the second floor. In 1894 a separate building was erected for the botany department at a cost of \$3,000 (p. 64); the trustees were engaged, at the same time, in building a dining hall and enlarging the facilities of the "Mess" at a cost of \$5,000. In 1896 the last of the wooden laboratories, about the size of the first building, was separately erected to provide a larger lecture hall on the first floor and a series of investigators' rooms on the second floor.² A small steam yacht, the "Wyandotte" (later named "Sagitta"), was purchased in the spring of 1890 for the purpose of aiding in collecting beyond the swift currents in the "Hole."

All these and other minor, but expensive, requirements put the trustees under great and constant pressure, to which they responded with steady devotion. After the second year they could congratulate the corporation on the prosperity of the Laboratory. By means of numerous small subscriptions from friends, by students' fees, and by receipts from piano recitals, the budget was balanced. Mrs. Glendower Evans had given \$1,000 for the library, and friends in Boston had collected a fund of \$2,500 to found the Lucretia Crocker Scholarships at the Laboratory for the benefit of teachers in Boston. In the third year, contributions in excess of \$3,000 paid for the ell and the steam launch and, with other receipts, balanced the budget. In the same year Mr. Joseph S. Fay, pioneer summer resident of Woods Hole, aided the Laboratory in the acquisition of the Gifford property, on which the Mess Hall and the Homestead of the Laboratory now stand, by giving \$500 toward its purchase and accepting a mortgage note of \$3,000 from the Laboratory, most of which was subsequently canceled by him. His daughter, Miss Sarah B. Fay, also furnished the use of two cottages freely.

In 1891 and 1892 contributions from various sources exceeded \$9,000; and increase of receipts from students' fees and receipts from contributing institutions, which began in 1892, balanced the budget for three years. In 1893 the trustees could again report great success,

² These buildings appear, with others, in the airplane photograph shown on p. 69. They are also included in the plan of central land and buildings, p. 64.

not only in the work but also in the finances of the Laboratory; already they were beginning to look forward to the time when endowment could be secured, but they hoped that the operations of the Laboratory could be stabilized on the existing basis with the generous aid of friends and the active support of colleges and universities. Unfortunately, there could be no such rest, for the pressure for expansion could not be arrested without detriment, as the trustees frankly recognized.

The years 1894 and 1895 were years of great activity, and the attendance rose to one hundred and ninety-nine. The financing of expansion became more difficult. One of the trustees, Dr. E. G. Gardiner, personally advanced \$3,000 for the erection of the botany building in 1894. In the same year the active members of the Laboratory, the investigators, feeling that much more remained to be done and that they had a personal stake in the development of the institution, organized the Biological Association, under Dr. Whitman's chairmanship, to aid "in securing funds necessary to the foundation of a Biological Station, as a national center of research in every department of Biology." Over seventy institutions were represented at the meeting, which thus constituted in reality, as Professor Whitman remarked, "a national convention of students, teachers and investigators in Biology." It was planned to form local committees in various scientific centers (III, 14, 1895). The trustees indorsed the plan and authorized approved local committees to raise funds.

In 1895 Professor Whitman, in his report, urged the need for yet another building for lectures and additional research rooms. The Executive Committee of the Board of Trustees supported the recommendation in a formal statement to the Board, and referred to the offer of the Biological Association to aid to the extent of \$1,500, provided that the trustees secured an equal sum.

In authorizing the erection of the botany building in 1894 the trustees had voted that "it be declared the policy of the Trustees that no further extension of the temporary laboratories be made, but that if more room for investigators shall be required it shall be obtained by limiting the number of students." When they received the recommendation of the Executive Committee for still another temporary building in January, 1896, a sharp difference of opinion developed; but the vote not to adhere to the policy stated in 1894 was carried by the slender majority of eight to six. Thereupon the trustees voted to erect the new building and to endeavor to raise \$1,500 of the required amount, the equal remainder to be furnished by Dr. Whitman. As it

afterward turned out, the entire amount was raised through the efforts of Dr. Whitman and the Biological Association. The building was occupied in the summer of 1896; it was the last of the temporary constructions for laboratory purposes.

Whatever the opposition to the administration that may have existed before among the trustees, this was the first overt demonstration. It is to be noted that all of the six trustees who voted in the negative belonged to the Boston group of nine; three of them were members or former members of the Woman's Education Association. All of them had been concerned with the early foundation of the Laboratory. It is clear that they had begun to feel that control was slipping out of their hands and that they were genuinely alarmed at the financial responsibilities devolving upon the Board.

It is important, at this point, to understand the relationship between the trustees and the "members" who constitute the corporation, for this has been a controlling factor in the history of the Marine Biological Laboratory. The members constituting the corporation proper elect—usually from their own membership—the trustees, who, in their turn, have the exclusive right to elect the members of the corporation. At their first meeting, immediately after incorporation in 1888, the seven trustees elected forty-seven additional members of the corporation, mainly from Boston or its neighborhood, who were interested in the undertaking either on scientific grounds or for other good reasons. The fee, set at one dollar a year, was no impediment to membership. In the second year, life-memberships, with a single fee of \$100, were also established. For several years it was the custom to elect to the corporation all workers at the Laboratory who signified their willingness to become members, and the membership grew to three hundred and four regular members and fifty-two life-members by 1894. This was in accordance with the announced policy of nation-wide representation. The result was that the multiplied membership completely lost its Boston complexion. In accordance with the same national policy, additional trustees were elected from Columbia University, Bryn Mawr College, Williams College, Princeton University, the University of Pennsylvania, the Academy of Natural Science of Philadelphia, Yale University, the University of Toronto, the Missouri Botanical Garden at St. Louis, Missouri, and Johns Hopkins University. Thus the dominance of the home city of Boston became lost, both in the corporation and in the trustees. The director was not made a trustee until 1897.

It was originally provided in the by-laws that

the annual meeting of the members shall be held in Boston on the fourth Wednesday of January in each year, at such time and place as shall be designated by the Trustees; and at such meeting the members shall choose by ballot a Clerk, Treasurer and seven Trustees, who shall hold their offices for one year, and until others are chosen and qualified in their stead [III, A, 2].

The next year the number of trustees was increased to eleven, and the date of the annual meeting was changed to the second Wednesday of November. In 1891 the number of trustees was again increased, to nineteen and two additional members ex officio; but no other changes were made in the by-laws until 1897. Four members constituted a quorum of the Board during all this time, and ten members continued to constitute a quorum of the corporation, although the membership had increased to over three hundred and fifty. However, the privileges of membership were never exercised by the vast majority until 1897. The time and place of meeting rendered this impossible for members of so many institutions, so widely scattered throughout the country.

During the same time the great majority of the workers at Woods Hole, also members of the corporation, had developed a strong spirit of devotion to the institution which was evidenced, among other ways, by the formation of the Biological Association already referred to. The staff and many of the senior investigators were regular attendants at the successive summer sessions, and some had established family summer residences at Woods Hole. These and other members of the corporation were devoted to the director and to the principles of organization that he so constantly held before them in his addresses and in personal conversations. The scene was thus set for them to take control if circumstances should ever warrant.

The occasion for taking control arose in 1897. After the split in the Board over the question of the last temporary building, various disciplinary measures, calculated to insure a greater degree of financial control by the Board, were taken. On the last day of December, 1896, the librarian was instructed to terminate all subscriptions to periodicals; and the director was informed that "owing to the entire absence of funds in the treasury no further indebtedness of any kind can be contracted until further action be taken by the Board." This situation culminated at a meeting of the trustees held in Boston on February 5, 1897, attended by only eight members, all of whom were resident in Boston or Cambridge, who voted, on recommendation of a recently appointed Committee on Ways and Means, "that the Trustees pro-

ceed to raise a sum of not less than \$2,000, not later than April 15, and that failing in this attempt the Laboratory be not opened the coming summer.”

In these proceedings the director was not consulted; they were, moreover, entirely unnecessary and certainly very prejudicial to the interests of the Laboratory. Mr. L. L. Nunn, one of the trustees, offered to be responsible for any debts incurred in 1897 due to ordinary operations, but the offer was declined “under the conditions imposed.” About \$1,000 was later pledged in contributions, and outstanding accounts paid in, so that a balance of several hundred dollars became available for future operations. On April 12 the trustees voted to open the Laboratory as “the conditions intended to be met by the vote demanding \$2,000 to be raised by April 15, have therefore been met.” A reduction of attendance occurred—from one hundred and three students and seventy-four investigators in 1896 to sixty-three students and fifty-eight investigators in 1897—because of the late issue of the announcement and the fact that rumors that the Laboratory would not be opened in 1897 had circulated among those interested. The delaying action was particularly ungracious because Professor Whitman had served as director without any remuneration and because success beyond all expectation had accompanied his efforts. He was in too strong a position to be merely dismissed, and the endeavor to hamper him and the work proved very unwise.

It was obvious that an issue had been raised that could not be compromised. The dissenting trustees—at most, seven or eight out of twenty-one—could have washed their hands of the whole affair by resigning, if they did not feel able to dismiss the director, head and front of the entire offense. There was a movement among them to have the teeth of the corporation drawn by changes in the by-laws making the trustees, legally as well as in practice, a self-perpetuating body, evidenced by a draft of proposed new by-laws inserted in the trustees’ minutes book in January, 1896; but there is no evidence that this movement ever received formal consideration either by the trustees or by the corporation. So the summer of 1897 began with the issue unresolved, though not forgotten.

Prior to 1894—that is, for the first five years—no meetings of the trustees or of the corporation had been held at Woods Hole. The wish of the director that at least one meeting of the trustees should be held in Woods Hole each year in order that they might gain some personal knowledge of the operations of the Laboratory was first realized in

1894, and thereafter a summer meeting of the trustees at Woods Hole became the custom. There was evident tension at the meeting held in Woods Hole on August 6, 1897, with eight members present. The meeting convened about two o'clock, and much time was occupied with consideration of the treasurer's report and the election of a large number of members to the corporation. With business still unfinished, three of the trustees felt obliged to withdraw to catch the last train to Boston, and the meeting was continued with five members present.

The discussion then turned to the question of holding the annual meeting of members at the Laboratory in the summer, when representative attendance could be expected. This would require a change in the by-laws; and a motion to call a special meeting of members in Boston on August 16, the earliest legal date, to consider changes in the by-laws, was passed with one dissenting vote. A committee of three was then appointed to prepare a draft of such changes.

The special meeting of the corporation thus called was by far the largest and most representative ever held up to that time; at least eighty-two members, representing thirty-eight institutions, were present. An attempt was made by the acting president, Professor Farlow of Harvard, to show that the meeting had not been called legally, in accordance with the by-laws. When this failed, he withdrew from the meeting. Camillus G. Kidder of New York, a trustee, was elected chairman of the meeting by unanimous vote. Important changes in the by-laws (III, A, 4) were voted. In order to secure a representative attendance of its members, the date of the annual meeting of the corporation was changed from the fourth Wednesday in January to the fourth Tuesday in August, and the Laboratory in Woods Hole was specified as the place of meeting. Special meetings of members might be called by the trustees either in Woods Hole or in Boston. The number of trustees was set at twenty-four in order to preserve a wide representation of institutions; and, instead of being elected at one time for a single year, they were divided into four classes of six each, of which only one class was to be elected each year for a term of four years. The quorum was raised from four to six for meetings of trustees. Finally, a committee of three was appointed to present nominations for a clerk and for twenty-four trustees, divided into four classes of six each, to be elected for terms of one, two, three, and four years initially, and thereafter for four-year terms.

In accordance with these changes in the by-laws, the annual meeting of the corporation was held in Woods Hole on August 24, 1897,

with a large attendance. The proceedings of the special meeting of August 16 were ratified and approved, including the changes in the by-laws; and certain minor changes were also incorporated (III, A, 4). Twenty-four trustees were elected in groups of six, each to serve, respectively, one, two, three, and four years; with three ex officio members, viz., the director, assistant director, and clerk of the corporation, the new Board consisted of twenty-seven members (III, A, 5). Of the nine Boston members, after withdrawals or resignations following re-election, only two remained on the new Board, which now consisted of twelve old and fifteen new members, representing fifteen universities and three independent scientific institutions.

Six of the Boston trustees and one other then united in a statement, published in *Science*, reflecting severely upon the financial conduct of the Laboratory by the director, to which an extended answer was made in the less public form of a pamphlet of twenty-seven pages, prepared by S. F. Clarke, E. G. Gardiner, and J. P. McMurrich, trustees, and distributed to members of the corporation, friends of the Laboratory, and others. Those who are interested in the controversy will find reference to the documents in the bibliography (III, 5, 18). The wounds were deep and healed slowly, but they have left no permanent mark.

Was this conflict inevitable? No one can impugn the standing or devotion to science and education of the persons principally concerned. The Boston trustees were responsible for the foundation of the Laboratory, and they met the deficit in cost of operation and raised funds for land and buildings without protest during a period of at least six years; and during the same time they expressed their satisfaction with the growing reputation and success of the Laboratory. The director and staff showed their devotion to the cause by unremitting and unselfish efforts; and they were responsible, much more than the trustees, directly instead of indirectly, for the scientific and educational success of the enterprise. The issue between the original trustees and the management was really one between ingrained cautious conservatism and confident progressivism. The management had more faith and a broader vision. Perhaps, if they had been able earlier to relieve the trustees of more of the burden of support, the issue might not have been so sharp. But it is doubtful whether the original trustees could ever have entered enthusiastically upon the untrod path of co-operative effort in science and education on which the management had set its feet.

II. INTERMEDIATE PLANNING, 1898–1902: PRESIDENT HARPER AND THE “CHICAGO PLAN”; THE CARNEGIE INSTITUTION

After the crisis of 1897 the annual meetings of the trustees and corporation were held at Woods Hole, and all traces of local control disappeared. The enlarged Board of Trustees included professors from nine eastern, four midwestern, and two Canadian institutions. There were also three nonprofessional members: the new treasurer, D. Blakeley Hoar of Boston, a devoted adviser in business affairs; Camillus G. Kidder, a distinguished lawyer of New York; and L. L. Nunn, of Telluride, Colorado, electrical and mining engineer. The main result of the crisis had been to secure freedom of development, according to the original plan of a national co-operative organization, and to arouse and spur on the original enthusiasm; it was really a second birth. Both the trustees and the director knew that they were faced with a difficult problem to preserve and develop the institution; it was their function to seek new sources of support.

The financing of the ordinary operations of the Laboratory presented a difficult but not insuperable problem. Receipts from fees and the growing business of the supply department, which furnished preserved specimens to colleges and universities, came near to meeting operating expenses; and any temporary lack of funds was met by donations and small loans. But considerable improvements and expansion of existing facilities were out of the question. Hand-to-mouth existence was irksome in itself, and the conviction that the Laboratory had an important role to play was growing instead of diminishing (III, 6). Attempts to raise more funds by direct appeal were at first not very successful.

A serious attempt was made in 1900 to induce universities and colleges that profited by use of the Laboratory to underwrite a larger share of the costs of operation. There were then twenty-four co-operating institutions that subscribed from \$100 to \$300 a year for the privilege of free places in classes or research accommodations. The hope was entertained that a few of the stronger institutions might be willing to make pledges for five years in advance, at the rate of \$500 a year, in return for a larger measure of control in the government of the Laboratory. This plan, if successful, could gradually be extended to include more governing institutions. Preliminary discussions were begun with several institutions, with some hope of success.

At a meeting of the Board of Trustees held in December, 1900, the Executive Committee was instructed to confer with eight such univer-

sities "to see if by a revision of the existing organization of the Laboratory and of the by-laws closer relations between universities and the Laboratory might not be brought about." The Laboratory, on its part, was prepared to agree to a separation of financial and scientific management by intrusting the former to a small independent board if necessary. In any event, the institutions composing the oligarchy were to be entitled to name their own representatives on the Board of Trustees of the Laboratory.

It was soon realized that, even with the greatest contemplated success of this undertaking, the income to be received would not be adequate for development beyond the existing status. In consequence, independent efforts were made by trustees in the Middle West and in the East to develop a more promising plan.

These efforts bore fruit in 1901 and 1902 in two separate and distinct offers to relieve the trustees of the Laboratory of the main burden of financial responsibility for operation and enlargement of the institution. In each case this was predicated upon relinquishment of financial control by the trustees and members and placing it in other hands. The offers showed confidence in the scientific competency of the organization but doubts of its ability to handle financial affairs—doubts which, it is only fair to say, were shared also by the membership. Coming, as they did, from two influential sources, the offers were a heartening recognition.

The first offer was made by Mr. A. C. Bartlett of Chicago, Mr. Charles Coolidge of Boston, Mr. C. R. Crane of Chicago, and Mr. L. L. Nunn of Telluride, Colorado, through President W. R. Harper of the University of Chicago, in a letter addressed to the director:

*Prof. C. O. Whitman,
Woods Holl, Massachusetts*

MY DEAR SIR:

Upon several occasions members of the body of Trustees of the Marine Biological Laboratory at Woods Hole have suggested, and indeed, urged, the necessity of a reorganization of that body in some such manner as to make provision for a stable business foundation. These statements, made by yourself, and others, have been under consideration for a period extending over two years. I am authorized by a company of gentlemen, including Mr. A. C. Bartlett of Chicago, Mr. Charles Coolidge of Boston, Mr. C. R. Crane of Chicago, Mr. L. L. Nunn of Telluride, Colorado, to say through you, to the Trustees of the Marine Biological Station, 1. That they will consent, with others, if so requested to do, to assume the responsibility of Trustees of the Marine Biological Station. 2. That, if elected Trustees, they agree to undertake to make reasonable provision for the work of instruction and research in the various lines

established; this provision to include the purchase of additional ground, the building of a laboratory, and an effort to make some form of the work continuous throughout the year. 3. That in direct furtherance of this plan they agree to provide ten thousand dollars for the expenses of the Marine Biological Station during the first year, (i.e. the year beginning January 1st, 1902), this sum being understood to be in addition to any money received as tuition fees in connection with the work of the station.

I am also directed to say: 1. That this proposition carries with it the understanding that the Trustees thus appointed shall be a self-perpetuating body and may be permitted to increase, at pleasure, the number. 2. That the present body of Trustees, at the option of the Association, shall continue as an advisory scientific staff. 3. That, as thus reorganized, the new Board of Trustees will sustain the same relation to the work at Woods Hole as is ordinarily sustained by a Board of Trustees to an institution of learning, a hospital, or an institution of research

It is with a clear appreciation of the responsibilities involved in this work that the gentlemen whose names are given above stand ready to assume this burden. I think it is not necessary to say that they are gentlemen who would not undertake work of this kind without a full determination to make the work a successful one.

I desire to repeat that this statement is made in reply to urgent and repeated requests made by the individual members of your Board of Trustees.

I remain

Yours very sincerely,

WILLIAM R. HARPER.

August 2, 1901.

President Harper's letter was received in ample time for consideration by the Board of Trustees of the Marine Biological Laboratory at their annual meeting on August 13. It was thoroughly discussed both before and at the meeting. Indeed, the plan had been gradually developed by Professor Whitman, in consultation with President Harper and with the advice of other trustees of the Marine Biological Laboratory, over a period of about two years, as demonstrated by Professor Whitman's correspondence. The trustees were therefore ready for the prompt action covered by the following letter:

August 13, 1901

Dr. W. R. Harper

President of the University of Chicago

DEAR SIR:

The Board of Trustees of the Marine Biological Laboratory acknowledge the receipt of your communication of the 2nd. inst., through Prof. Whitman, concerning the reorganization of the Board in such manner as to provide for a stable business foundation. And they desire to express to yourself and through you to Mr. A. C. Bartlett of Chicago, Mr. Charles Coolidge of Boston, Mr. C. R. Crane of Chicago, and Mr. L. L. Nunn of Telluride, Colorado, their grateful appreciation of the generous proposal made in your letter. The plan presented on behalf of these gentlemen for the maintenance and growth of the Laboratory is one that commends itself to the present board; and its members pledge themselves to co-operate with yourself and the gentlemen named to ensure its success. To this end Mr. Bartlett, Mr. Coolidge, Mr. Crane

and Mr. Nunn have been elected members of the present board of Trustees, and the Corporation of the Marine Biological Laboratory has voted to this board full power to modify in any way the by-laws of the Corporation, thus making it possible to carry the plans to completion at the next meeting of the board to be held in Chicago during the last week of December, 1901.

This is the fourteenth session of the Laboratory; during its entire existence the Laboratory has stood steadily for two ideals:—1. The furtherance of Biological Research. 2. As a means to this end the establishment and maintenance of a national character, through the co-operation of Universities, Colleges, and Scientific Bodies, avoiding, however, any one-sided alliances that might alienate large numbers of scientific men. The list of publications made by members of the Laboratory is evidence of success in research; and the composition of the board of trustees, and the steadily growing list of co-operating Societies, Universities, Colleges, and of Institutions represented by members of the Laboratory fully establish our claim to be a national institution. The board of trustees regard these matters as fundamental and desire to preserve both the research spirit and complete independence, forming alliances with all scientific bodies, but amalgamating with none.

The Board of Trustees are therefore of the opinion that it is desirable that the proposed increase of the new board should make it as representative as possible of all interests centering in the Laboratory, and think it would be desirable to have a distinct understanding concerning the future status of the Laboratory.

On the completion of the proposed board the Trustees of the present board will vote to it the full powers of the Corporation and Trustees, and will provide for their own continuance as an advisory council with functions to be defined in consultation with the proposed board.

[Signed]

C. O. WHITMAN

SAMUEL F. CLARKE	CHARLES W. HARGITT
CHRISTIAN A. HERTER	WM. A. LOCY
EDWARD G. GARDINER	THOMAS HUNT MORGAN
JACQUES LOEB	FRANK R. LILLIE

The three gentlemen named by President Harper, in addition to Mr. Nunn, who was already a trustee, were elected members of the Board. The principles of the national, independent, and co-operative organization of the Laboratory were stressed; and the trustees pledged themselves to transfer necessary powers to the new Board whenever the proposed increase of its members should make it fully representative of all interests concerned and the functions of the proposed advisory council to be composed of members of the existing Board should be defined. The offer was thus accepted in principle; and the corporation, at their meeting on the same day, voted necessary powers to the Board to carry the plan to completion.

At the next meeting of the trustees, held in Chicago on January 2, 1902, a completely new set of by-laws (III, A, 6) was presented and

adopted, subject to ratification by the trustees at a special meeting to be held in the state of Massachusetts. These presented the familiar feature of financial control by a relatively small, self-perpetuating Board of Trustees, but with special features intended to secure independent scientific control through a "Scientific Council" of limited numbers with right to nominate the director, approve changes in the by-laws, and perform advisory functions. At a special meeting for purposes of ratification, held in Boston, January 11, 1902, a bare quorum of seven members was present, and the director was absent. On this ostensible account, action on ratification was postponed for consideration at another special meeting, in February; and President Harper was requested to furnish a more definite statement of the plan and wishes of the gentlemen named by him.

There were both negative and positive reasons for these dilatory tactics. There is no doubt that apprehension existed in the minds of some of the trustees of the Marine Biological Laboratory lest consummation of the plan proposed in President Harper's letter should tend toward control by a single university, namely, the University of Chicago, at that time rapidly expanding under the inspiration of its great first president. This apprehension was sometimes expressed in blunt language. On the positive side, there was the hope of securing at least equal aid from the newly established Carnegie Institution if the situation remained unprejudiced.

President Harper did not speak for himself or for the university of which he was president, but for the four gentlemen whom he named. In reply to the request of the trustees, cited above, for a more definite statement he reaffirmed their intention to maintain the independent status of the Laboratory.

CHICAGO, January 28th, 1902.

Mr. E. G. Gardiner
131 Mt. Vernon Street
Boston, Massachusetts

MY DEAR SIR;

In reply to a letter from the Board of Trustees of the Marine Biological Laboratory, under date of August thirteenth, 1901, and to the resolutions of their meeting under date of January eleventh, 1902, I desire to say: That, in conference with the gentlemen named in my former letter, I am informed by them, first that they accept the by-laws of the corporation, as passed at a meeting of the Board of Trustees of the Marine Biological Laboratory held in Chicago January second, 1902, as limiting their trusteeship. Second, that, as before stated, they would undertake to make reasonable provision for the work of instruction and research in the various lines established, this pro-

vision to include the purchase of additional ground, and the building of a permanent laboratory, and an effort to make some form of the work continuous throughout the year. In direct furtherance of this plan, to provide, for a period of five years after and including the year 1902, a sum of not less than ten thousand dollars a year in addition to all income from fees, rental of rooms, sales of supply department, et cetera. Third, the gentlemen agree with the principle stated in the letter of August thirteenth, 1901, that it is desirable that the proposed increase of the new board should make it as representative as possible of all interests centering in the laboratory. They consider that the future status of the laboratory as an independent institution is guaranteed by the acceptance of the by-laws.

So far as I understand the purpose of the gentlemen named, they would plan to retain unaltered so far as possible the previous policy of the laboratory, and would hope to retain the support of all colleges, societies, and laboratories heretofore co-operating, and would endeavor to secure the co-operation of others.

You will of course appreciate the embarrassment caused by an effort on my part to represent these gentlemen. At the same time I think I have fairly expressed their position, I remain

WILLIAM R. HARPER.

The idea of disturbing the national, independent status of the Laboratory was certainly not in the minds of the gentlemen on whose behalf President Harper wrote, for three of them served for long years as trustees and benefactors of the Marine Biological Laboratory after President Harper's plan was discarded; one of them, indeed, Mr. C. R. Crane, acted as president of the corporation for over twenty years (1904-24). It was also inconceivable that Dr. Whitman should falsify his consistent stand for a national organization. Everything that followed afterward shows that President Harper was equally free from an intention of securing control by his university. The proposal, never actually adopted, was a characteristically generous impulse on his part.

The hope of support from the Carnegie Institution was revealed at a meeting of the Executive Committee of the Board of Trustees held in New York on February 1, 1902. At this meeting, in addition to the five members of the Committee, four other trustees were present by invitation. Professor H. F. Osborn, president of the corporation, laid before the meeting certain reasons why it seemed probable that the Marine Biological Laboratory might receive important aid from the Carnegie Institution. A committee of four trustees, including H. F. Osborn and E. B. Wilson, was then appointed to confer with the Executive Committee of the Carnegie Institution.

The Carnegie Institution had been incorporated on January 4, 1902, and the deed of trust from Andrew Carnegie conveying ten million dollars in bonds of the United States Steel Corporation to the

trustees of the Institution was executed on January 28. The announced purpose of the trust was to encourage investigation, research, and discovery in the most liberal manner possible. On January 30 the Executive Committee of the Institution appointed eighteen advisory committees in various branches of learning, of which that in zoölogy was headed by H. F. Osborn, president of the Board of Trustees of the Marine Biological Laboratory. E. B. Wilson, also a trustee, was another member. It will be seen, therefore, that the Marine Biological Laboratory was early on the ground.

Osborn and Wilson, acting for the Executive Committee of the Laboratory, met the Executive Committee of the Carnegie Institution informally on February 8 and placed before them all the principal facts regarding the past history and the present status of the Marine Biological Laboratory and asked their consideration of the following three points:

First: The general question whether the Carnegie Institution would support the Marine Biological Laboratory with the intention of placing it on a permanent basis as a representative national research laboratory.

Second: The specific question of support for the laboratory for the coming summer.

Third: The best practicable organization of the laboratory that would commend itself to the Carnegie Institution as an assurance of its national representative character [III, A, 7].

The matter was then discussed at a later meeting of the Executive Committee of the Carnegie Institution on March 11, 1902, at which Dr. J. S. Billings was appointed "to investigate and report upon the desirability of the Carnegie Institution making a grant for the maintenance of the Marine Biological Laboratory at Woods Hole, Mass." For this purpose he conferred with Dr. Wilson and laid down conditions under which the Carnegie Institution might be prepared to place the Laboratory on a permanent basis.

A special meeting of the Board of Trustees of the Marine Biological Laboratory was then called on March 22, 1902, to consider the prospect. The trustees acted by appointing a conference committee of six members, consisting of Messrs. Whitman, Crane, Nunn, Hoar, Herter, and Wilson, to meet with the Executive Committee of the Carnegie Institution. This committee acted under the following resolutions which constituted a commitment of a provisional character:

1. *Resolved* that the Trustees approve the incorporation of the Marine Biological Laboratory by the Carnegie Institution on the lines indicated in the letter of Dr. Bil-

lings, and that the chair appoint a committee of six, including himself, to confer with the Executive Committee of the Carnegie Institution and make such arrangements as are deemed advisable and necessary regarding the legal incorporation, the personnel of the new board and the manner of conducting the Laboratory in the future. This committee to report to the present board for final action as soon as practicable.

2. *Resolved* that it is the sense of this meeting that it is desirable that the incorporation be so conducted as to leave open and invite co-operation of the present friends and supporters of the Laboratory and others.

Copies of the above resolutions were promptly forwarded to the Executive Committee of the Carnegie Institution and were considered by them in a meeting on March 25, 1902. They adopted a set of resolutions (III, A, 8) approving the "acquirement of the Woods Hole Laboratory by the Carnegie Institution, with the understanding that the Trustees of the Laboratory are willing to turn over its plant to the Institution, provided the latter will undertake the maintenance and support of the Laboratory"; and they made a grant of \$4,000 to the trustees of the Marine Biological Laboratory, payable on or after August 1, 1902, as a contribution toward the expenses of the Laboratory during the approaching session "if satisfactory evidence is furnished to the Executive Committee that the Trustees of the Woods Hole Laboratory have full power to transfer the property of the Laboratory to the Carnegie Institution, and have agreed to do so." This contribution was later received and used. It was the first grant for scientific purposes authorized by the Carnegie Institution (III, 3).

The Carnegie Institution also appointed a conference committee of three—John S. Billings, A. S. Hewitt, and S. Weir Mitchell—which met with the conference committee of the Marine Biological Laboratory in New York on April 11, 1902. In the course of this meeting, the Carnegie representatives were asked if they would accept a joint board of trustees representing equally the Marine Biological Laboratory and the Carnegie Institution. They stated that they could not accept divided control and that, if the Marine Biological Laboratory desired to remain separate and independent, the Institution might from time to time make separate grants to the Laboratory. Following this, the conference considered by-laws previously prepared by representatives of both institutions to be used in case of acceptance of the offer of the Carnegie Institution. A second meeting of the two conference committees was held on May 31 (III, A, 10).

In the meantime, Professor Whitman had addressed a circular letter to the trustees of the Marine Biological Laboratory (III, A, 9) in which he presented in strong terms the position that he, Mr. Crane, and Mr.

Nunn had maintained consistently in the meetings of the two conference committees, to find a way of combining both sources of support and preserving the independence of the Laboratory. He maintained that the resolutions passed at the meeting of the trustees on March 22, which he himself had presented, "were intended not to bind us irrevocably, but to prepare the way for *securing co-operation in the support of the Laboratory.*" This was evidenced by the appointment of two of the trustees of the proposed "Chicago plan," Messrs. Crane and Nunn, to the conference committee. The intention is also made plain by careful reading of the resolutions.

The members of the Marine Biological Laboratory on the conference committee then made a detailed factual report, about June 1, 1902, in a circular letter signed by all of its members and addressed to the trustees of the Laboratory (III, A, 10). Certain changes in the proposed by-laws were recommended, and the whole matter was to be considered by the Marine Biological Laboratory trustees at Woods Hole in the summer.

A special meeting of the Board of Trustees of the Marine Biological Laboratory was held at Woods Hole on July 19, 1902. At this meeting the by-laws proposed by the Executive Committee of the Carnegie Institution for the government of the proposed Department of Marine Biology (viz., the Marine Biological Laboratory), together with the proposed amendments thereto, considered and approved by the Conference Committee of the two bodies, were taken up and discussed article by article. Amendments proposed and unanimously approved were recommended to the Executive Committee of the Carnegie Institution (III, A, 11). The treasurer was thereupon authorized and instructed to execute a deed, which was presented and approved by the trustees, conveying all the property of the Laboratory to the Carnegie Institution. Inasmuch as the final power to effect the transfer rested with the corporation, a committee of five members (Cornelia M. Clapp, E. G. Gardiner, C. O. Whitman, E. B. Wilson, and Frank R. Lillie, chairman) was appointed to report the entire situation to the corporation. They accordingly drew up a report, signed by all the members, recommending confirmation of the actions of the trustees at the regular annual meeting to be held August 12, 1902, at Woods Hole. This report was printed and distributed to all members of the corporation on July 28, 1902 (III, A, 12).

The annual meeting of the corporation of the Marine Biological Laboratory was held on August 12, 1902, following a meeting of the

trustees at which the trustees had adopted the report of the committee to the corporation as its own. The deed conveying all the property of the Laboratory to the Carnegie Institution was read to the corporation and discussed; and, when the motion was put, sixty votes were cast in favor of the transfer and three against. Thus the transfer appeared to be finally consummated, lacking only formal acceptance by the Carnegie Institution. On August 14 the result was announced *in extenso* by Boston newspapers (III, 2).

At their special meeting on July 19 the trustees of the Laboratory had appointed a committee to draw up a report of plans for the future development of the Laboratory to be presented to the Carnegie Institution for its consideration. It had been suggested during the summer by members of the Executive Committee of the Carnegie Institution that the report should include an ideal plan, limited in extent and cost only by wise consideration for the future development of marine biology, as well as a practical plan based on an estimate of about \$80,000 for land, buildings, and permanent equipment and an income for maintenance of from \$20,000 to \$30,000 a year.

This report was accordingly prepared and transmitted to the Carnegie Institution on September 20, 1902. The preamble contained the following significant statement:

Some of the undersigned are, however, of the opinion that had the trustees and corporation of the Marine Biological Laboratory realized the possibility of receiving any adequate unconditioned support from the Carnegie Institution, their action might have been different. They therefore wish to reserve the right to declare their preferences in another place provided it should seem advisable later to do so. In case such a statement were to be made, it would be presented before the November meeting of the trustees of the Carnegie Institution.

It also contained a statement on the scope and aims of the Marine Biological Laboratory by Professor Whitman, with characteristic emphasis on the necessity of freedom of development for the life of the Laboratory.

So far, the conditions under which the Carnegie Institution would take over and administer the Marine Biological Laboratory as one of its departments had not been made very clear; the vote of the corporation of the Marine Biological Laboratory to transfer to the Institution all of its property on the basis of a merely general understanding was therefore a signal mark of confidence on the part of the Laboratory and was felt to be so by the Carnegie Institution. Apparently the Institution had failed to understand fully the deep-seated character of

the divergence of opinion within the membership of the Laboratory; and, when they began to realize it, as a result of the report rendered to them and of discussions both public and private, they decided to refer the whole situation back to the Laboratory.

The events that led to this decision and to the denouement were as follows: Professor J. McKeen Cattell, of Columbia University, editor of *Science*, acting with his characteristic vigor, honesty, and courage, was one of those who, as a member, opposed the action of the corporation of the Marine Biological Laboratory at their meeting in August. On September 19 he published an article in *Science* (III, 4) concerning policies which it would be desirable to establish in the Carnegie Institution, in which the acquirement of the Marine Biological Laboratory by the Carnegie Institution was opposed as likely to be injurious to both institutions. Professor Whitman had submitted an article on the subject to Dr. John S. Billings, representing the Executive Committee of the Carnegie Institution, which he proposed to publish; but Dr. Billings' reply led him to withdraw it. However, after publication of the Cattell article, Dr. Billings wrote to Professor Whitman withdrawing his objections; and the article, entitled "The Impending Crisis in the History of the Marine Biological Laboratory," appeared in *Science* on October 3 (III, A, 13). Professor Whitman interpreted the action of the corporation on August 12 as essentially a vote of confidence in the Carnegie Institution and pointed out that "only our part of the situation was entirely definite."

This led the Executive Committee of the Carnegie Institution to make a definite statement on October 4 of the principles that would govern them in recommendations to the trustees of the Institution (III, A, 14). This statement was immediately transmitted with a covering letter to the acting secretary of the trustees of the Marine Biological Laboratory, Professor E. B. Wilson, and by him, in turn, submitted to all the trustees.

Of the principles stated, the main features that occasioned some surprise and disappointment to many of the trustees of the Marine Biological Laboratory were the requirement that instruction should be eliminated from its activities and the fact that provision for buildings, boat, and maintenance was much less than expected. To base the operations on the model of the Naples station, however great the respect felt for this institution, was also felt to be a serious limitation. If the Carnegie Institution could decide in advance that the historic policy of combining instruction with research could not be approved

(item 2 of their statement), what value could be attached to the control of operations and the advisory functions of the "Board of Managers" provided for in the sixth article of the proposed by-laws (III, A, 11)? This and other pronouncements in their communication of October 4 (III, A, 14) indicated that after the controversy they preferred to withdraw from their original commitment. The way out that they offered to the Marine Biological Laboratory, viz., to grant aid to the Laboratory at the rate of \$10,000 a year for a period of three years, was an easy path for the time.

The time set for reply to the proposal of the Carnegie Institution—by October 25—was short; and the decision had to be made by the Executive Committee of the Marine Biological Laboratory. Wilson's report on the replies of twenty-one trustees to the Carnegie statement of October 4 showed five unconditionally in favor of the conditions stated and sixteen in favor of the alternative offer of a grant of \$10,000 a year for a limited period. This was duly considered by the Executive Committee, and a majority of its members—three in number—joined in the following report:

MAJORITY REPORT OF THE EXECUTIVE COMMITTEE
OF THE
MARINE BIOLOGICAL LABORATORY
TO THE
EXECUTIVE COMMITTEE OF THE CARNEGIE INSTITUTION.

The undersigned members of the Executive Committee of the Marine Biological Laboratory, deeming it impossible to obtain a meeting of the Trustees of the Laboratory in time to return an answer, before Oct. 25th, to the resolutions of the Executive Committee of the Carnegie Institution made at their meeting at the Fifth Ave. Hotel, New York City, Oct. 3 and 4, 1902, beg to reply for the Trustees of the Marine Biological Laboratory as follows:—

1. That the general principles stated in the communication of Dr. Billings, that would govern the Executive Committee of the Carnegie Institution in its recommendations as to the Trustees of said Institution, are in some essential respects so different from anything that has been hitherto considered by the Corporation and Trustees of the Marine Biological Laboratory, that they would not feel justified in authorizing the transfer of the property of the Corporation without adequate reconsideration by that body and the Trustees.

2. They therefore desire to state their opinion, that the Marine Biological Laboratory should for the present retain its independence.

3. In pursuance of the suggestions of the sixth article of the communication of the Executive Committee of the Carnegie Institution, the Executive Committee of the Marine Biological Laboratory would respectfully request a grant of 10,000 dollars a year for a period of three years, the Marine Biological Laboratory on its part agreeing

to place twenty research tables at the disposal of the Carnegie Institution, the occupant of each to be furnished with supplies and material substantially as is done by the Naples Laboratory.

Oct. 24th, 1902.

C. O. WHITMAN
F. R. LILLIE
JACOB REIGHARD.

The other two members of the Executive Committee, in a minority report, agreed with the majority that the transfer of the Laboratory to the Carnegie Institution was for the present inexpedient and concurred in asking for a grant of \$10,000 a year; but they did not agree with the first statement in the majority report. They hoped that the matter might come up for reconsideration at a later time. Application for a grant of \$10,000 a year to the Carnegie Institution for three years—1903, 1904, and 1905—in return for the assignment of twenty tables each year to the Institution was accordingly made and was approved by the Institution. At the end of the period of three years, application for continuation was declined; and the Carnegie Institution established its own department of marine biology at Tortugas, Florida, under the directorship of Alfred G. Mayor.

If ever courtesy and mutual respect were rewarded, this was notably the case in the relations between Dr. Billings and Dr. Whitman. To quote from Dr. Billings' letter:

The generous act of confidence in the Carnegie Institution by the Trustees and Incorporators of the Marine Biological Laboratory at Woods Hole in offering to turn over their property without definite conditions, has been highly appreciated by the Executive Committee, and I hope it will be clearly understood by the Trustees that this action of referring the matter back to them for further consideration, is intended only to give them a full opportunity for considering the whole question anew, if they so desire, after understanding the action which the Executive Committee proposed to take in its recommendations to its own Board of Trustees [III, A, 14].

The differences of opinion between Whitman and Wilson led to a polite controversy in *Science* (III, 16); Gardiner and Cattell also exchanged verbal blows in the same arena (III, 17), but no heads were broken; and all positions were explained.

The independence of the Laboratory was preserved, thanks to Professor Whitman's persistence and the support that he earned and received within the organization. The second crisis in the history of the Laboratory, in which counsels were divided, was past. The result was received with a general, if not unanimous, sigh of relief. The temper of the proceedings was creditable to all the parties concerned, animated as they were by a sincere desire to promote the interests of science in a

way best suited to the existing situation of the Marine Biological Laboratory. Opinions differed respecting ways and means of securing this end; but, though somewhat tinged with emotion, they did not become acrimonious and were not the occasion of rupture of friendly relations. The principles of independence, of national organization, and of administration by scientific workers were not thereafter to be challenged. They were, indeed, reasserted thirty-six years later by the trustees of the Laboratory in a special report (III, 14, 1938) defining policies with reference to plans for future development.

The whole experience was somewhat disillusioning to Professor Whitman; although he had found abundance of personal devotion, there were but few who held with anything like equal intensity his belief that the ideals of organization for which he had fought were of value far superior to any degree of financial security. Although his convictions had never wavered, his loyalty to his associates led him to a degree of compromise during the proceedings which it was painful to him to grant. In a letter to one of the trustees written in November, 1902, he said:

If the new turn of events is somewhat of a trial to you, don't forget that I have had during the year more than one trial quite as severe. The corporation meeting—to mention but one—was a bitter trial to me, for I felt that the action contemplated was to be final, and that it would prove fatal to long-cherished hopes.

However, he ended the year on a note of exultation in a long circular letter to the trustees. It began:

The new year brings the blessings of a defined situation. In this there is a quieting sense of security—just a little rest for the optimists, a little peace for the pessimists. Providence has evidently intended to extend the period of our probation, and to hold us, *nolentes volentes*, firmly to *terra firma*. . . . Whether for better or for worse, we are left with our humble possessions all our own, with all the vexatious responsibility of independence, with all the agony of our old incentives to pull and sweat and pray together, with little hope of ever moulting our restless anxieties this side

“That undiscovered country, from whose bourn
No traveler returns.”

Following this (III, 12), Whitman gradually withdrew from active participation in the management of the Laboratory, although he retained the title of director until 1908. However, he no longer attended meetings and was even absent from the Laboratory for two successive seasons, 1904 and 1905. The house which he had occupied at Woods Hole burned down in the winter of 1905–6; and, fearing that this would make his return impossible, his friends raised a sum of

\$3,000 by subscription and the property was bought and the house restored and presented to Whitman. This very signal mark of love and appreciation on the part of his friends, indicating, as it did, so clearly their desire to remove every obstacle that prevented his presence among them, touched Whitman most deeply. He was present again at the Laboratory in the sessions of 1906 and 1907, but never again except for a brief visit of two or three days in 1909. He died on December 6, 1910, in Chicago.

This chapter is a record of struggle and recurring crises in the first fourteen years of the history of the Marine Biological Laboratory. They were stormy years in which fundamental principles of organization were confirmed and established. The crisis of 1897 witnessed the end of local control and the establishment of nation-wide control. The proposal for an oligarchical control by a few strong institutions met an adverse fate soon afterward, and with this expired also the idea of institutional membership. For a time the conception of separating financial and scientific control seemed to be in the ascendancy, but it met with a similar rejection in the failure both of the Chicago plan and of that of the Carnegie Institution in 1901 and 1902. From that time on, the principle of free co-operation, as described in Chapter V, has prevailed peacefully, and steady progress has been made. It has seemed worth while to relate the early struggles in some detail for the benefit not alone of members of the organization but also of those interested in forms of educational organization.

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