

SCIENCE

VOL. 99

FRIDAY, MAY 19, 1944

No. 2577

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SCIENCE: A Weekly Journal devoted to the Advancement of Science. Editorial communications should be sent to the editors of SCIENCE, Lancaster, Pa. Published every Friday by

THE SCIENCE PRESS

Lancaster, Pennsylvania

Annual Subscription, \$6.00 Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary in the Smithsonian Institution Building, Washington 25, D. C.

THE BIOLOGICAL LABORATORY AT COLD SPRING HARBOR¹

By ROBERT CUSHMAN MURPHY

PRESIDENT, THE LONG ISLAND BIOLOGICAL ASSOCIATION

THROUGHOUT more than a half a century the Biological Laboratory has been fortunate in the character, even more than in the number, of its friends. These fall into two groups, one made up of men and women professionally devoted to scientific careers, who have studied, taught, attended the Symposia or conducted research at Cold Spring Harbor. Many of these maintain their membership in the association, even though they reside in educational communities scattered all over the United States or in foreign lands.

The second comprises neighbors (in the sense that they are chiefly Long Islanders), who represent public-spirited and enlightened sentiment in the area.

The two classes overlap, of course. Within a few weeks we have lost a distinguished man who belonged to both, and who for fifty years had been in many ways

¹ Address at a winter meeting of the members of the Long Island Biological Association, held at the residence of Mr. and Mrs. Russell C. Leffingwell in New York City, March 20, 1944.

the first of our friends and builders, namely, Dr. Charles B. Davenport. You will remember also that his son-in-law, Dr. Reginald G. Harris, was director of the laboratory until his death, and that all other members of his family have been closely tied up with the growth of our institution. Many of you knew Dr. Davenport so well that no words of mine could enhance your appreciation. We have endeavored to crystallize our joint thoughts in a resolution which appeared in SCIENCE of March 10, 1944.

Nothing in human affairs is more satisfactory than a tradition of sound heads and large hearts. It is an inspiring experience to look back through the annual reports of many years and to read the names of the men and women of science and of national and world affairs who have given time, energy and judgment toward the advancement of our work. Happily, some of those from the early days are still working with us, and others, such as Mr. Russell C. Leffingwell, Mr.

Henry L. Stimson and Professor H. E. Walter, carry the badge of the old relationship through election to the post of director emeritus.

Dr. Demerec, director of the laboratory, has just given us a memorable account of its importance in relation to victory. If it had no other value than this essential one during a period of national crisis, it would justify all the work and other wealth that have ever been put into it. Because modern war involves not only armies but also everybody else—the helpless along with the combatants—it is no longer practical to count on “getting ready” when the blow falls. That is the way to defeat and to a lost cause. Rather, we have to “keep ready,” and the existence of such an institution as ours, with its corps, its equipment and its status as a going concern, is an important item in that plan.

In fact, if we search for a single field in which our country has had an advantage over all its enemies, we find it in the number of thoroughly trained scientific minds of the highest quality, and in the sufficiency of tools by means of which the varied research of such minds is carried out. It would be impossible to overestimate the brilliance and diversity and effective organization that civilian science is contributing to the struggle in which we are all engaged. Without that concentrated skill and triumphant devotion to a common end, neither military nor industrial genius could have brought us as far along the road as we have come. It is safe to say that never in history has science been called upon for such a vast and coordinated piece of team-work within so short a period.

Happily, however, there is no need to point to war in order to justify our place in society. Peace is our true medium. We hope that when it spreads its light again we may never see the end of it. Our real program is a long-term affair; our aims lie in pure research rather than in fields that even border on industrial research. The practical applications come anyway, but the goal is simply truth. Science is in complete accord with at least one avowal of religion, namely that the truth will make us free. Last year, Dr. Demerec quoted in his report on research the following apt paragraph from the annual review by President Raymond B. Fosdick of the work of the Rockefeller Foundation:

We must of necessity serve the war effort, for there is no future for what we most desire in a world dominated by fascism. But we have a responsibility equally compelling to preserve the treasures of the spirit which we hold in trust from the past for the benefit of the generations to come. There must be no broken link in the chain, no flaw in the title deeds by which what we most cherish is transferred to the future.

The restrictions of the present “gasolineless” times, which prevent our members from coming to the laboratory with their former freedom, fortunately coincide

with the fact that we are not at the moment able to do justice to visitors. Much research of a highly confidential nature is in progress at Cold Spring Harbor. A temporary change of régime has been necessitated by the war. Even the “Symposia on Quantitative Biology,” instituted by Dr. Harris in the summer of 1933, have had to terminate for the present. At least, they were not allowed to peter out. They ended in a blaze of glory in the Symposium on “The Relation of Hormones to Development,” attended by 117 individuals, including representatives from Canada and from Chile, at the opposite ends of the Americas. When victory has been won, the Symposia will be resumed.

The ten published volumes of the Symposia are a noble scientific record. They are not light reading; as Mark Twain once said about something else, you might have difficulty in following the plots of some of the stories. They deal with such subjects as protein structure, bioelectric problems, radiation, growth and decay, the origin and functions of hormones, viruses, oxidation systems, the physics and chemistry of blood cells and the genes and chromosomes. They are evidence that now, as always in the past, the laboratory has kept in the forefront of significant biological trends.

If you want a sign of truly critical approval of recent activities of the laboratory, it is to be found in the attitude and actions of the foundations. They are proverbially hard-headed organizations, quite beyond favor or cajolement. Some of them list in their annual reports not only the pleas they have granted, but also the many worthy causes to which aid has had to be denied. Even to be listed among the unsuccessful applicants is an honorable estate! Lack of success by no means reduces them to the status of the candidate for a job in India, who cited as a high recommendation the fact that he had “failed entrance to Calcutta University.”

But the foundations have not turned down the special needs of our laboratory. On the contrary, they have treated us through the years with conspicuous generosity. The Rockefeller Foundation, responsible for financing our Symposia, has recently joined with the Carnegie Corporation in enabling us to purchase on highly favorable terms a priceless parcel of land including the former residence of Mrs. Henry W. de Forest. This acquisition, now the home of our director and his family, together with the antecedent gift from Mrs. de Forest of the famous Sand Spit and of nine acres of harbor shore and upland, have enormously enriched the permanent outlook of the laboratory.

While speaking of the Carnegie relationship, which has been for many years so close that we make up practically one Cold Spring Harbor family, I may

remind you that it is the Carnegie Institution of Washington which lends us, by the year, the services of our director, Dr. Millislay Demerec.

My membership in the board of this association, which is a very great honor, is of only a few years' standing. But my relationship with the laboratory has grown to be an old story. I want for the moment to jump back nearly forty years in order to explain what the laboratory means to me, and what it does or may mean to many of the rest of us.

In the summer of 1907, the International Zoological Congress met for the first time in America. I was then spending a year at the American Museum of Natural History, before going to college, and I had the good fortune to be attached as a sort of aide-de-camp to several of the visiting scientific men from continental Europe. This gave me a profound feeling of importance, together with an opportunity to partake of all the free food and transportation provided for our guests. We invaded Cold Spring Harbor in force on what was the first visit for most of the foreign gentlemen as well as for myself, and proceeded to dispose of a gargantuan clam-bake. The occasion gave me visual proof of the valor of Englishmen, which has served them so well from the year 1066 to the present. It was demonstrated by the manner in which the professors from that country tackled steamed clams, corn on the cob, watermelon and various other products of this wild aboriginal land that they had never before seen. At the end of the orgy, the shells, shucks, husks and carapaces piled in front of each satiated man of science bulked about one cubic meter!

To cap the climax, one of the central European visitors joyfully announced that he had seen his first "Kolibri," by which he meant a ruby-throated hummingbird paying a visit to Mrs. Davenport's trumpet flowers.

The laboratory was a simple institution in those days, at least by comparison with the advantages we now possess. It had been founded seventeen years earlier, at a low economic ebb of the community following the end of the whaling era and of the manufacturing that once flourished in Cold Spring Harbor. Such subjects as invertebrate zoology had not yet given way to biophysics, genetics and experimental endocrinology, with all their formidable apparatus. Yet I can remember how greatly I was impressed by the prestige that the laboratory enjoyed among our noted visitors from all quarters of the globe. It is easy to understand this in retrospect because, even before that date, intensive studies of the life of the Sand Spit had carried the fame of Cold Spring Harbor into classrooms everywhere.

No doubt, moreover, much of the later work of the laboratory has made louder echoes at a distance than close to home. It is the same old handicap, affecting the rôle of the prophet in his own country. The laboratory has been supported mainly by a closely knit group of Long Island neighbors, yet its reputation may be greatest in San Francisco or London or Naples or Stockholm.

In the 1941 Annual Report, it was pointed out that our institution is only one year younger than the Marine Biological Laboratory at Woods Hole. A roster of the instructors, investigators and participants in scientific conferences at Cold Spring Harbor would include a large proportion of the outstanding American biologists of the past half century. Approximately 2,500 of them have received part of their training at our plant.

So, all in all, we have a lofty heritage. Who are they that will accept it and pass it along as a dynamic asset to succeeding generations? It is the future that should now claim our concern. While the war lasts, Mars—as always—will find means to keep his helpers going, but the god of war makes no provision for what follows.

Neither can we look to the foundations for our general needs, because their function is rather to nurture the infant idea and to carry it along until its bones harden, after which it must toddle on its own legs and prove that it is worthy to grow up.

Nor, in my opinion, does it profit us to think in terms of a great endowment. To-day there are serious doubts about the future adequacy of invested funds belonging to institutions thousands of times richer than we can ever hope to be.

No, it is as a membership body that this association is to sink or swim. We welcome our affiliates without reference to their geographic ties, but it seems to me that Long Island is our natural field, particularly as regards laymen. Surely there are enough potential friends in that area to carry the laboratory program superbly at imperceptible sacrifice. A thousand new small annual contributions would be worth more to us in the long run than a single gift representing the same total.

What we all hope to see on Long Island is a great burgeoning of proprietary interest in the laboratory, so that the residents of Smithtown, Greenport, Orient, Montauk, the Hamptons, Riverhead, Ronkonkoma, Islip and Cedarhurst—not forgetting Patchogue, Aquebogue, Nissequogue, Cutchogue and just plain Quogue—may feel that it belongs to them no less than to the generous folk of the nearby communities who have proudly carried the standard through so many fruitful years.