C. Pupae approximately one day old were put into solutions containing 10 μc/ml. Adults emerging 24 to 48 hours later were examined and found to average only 30 cpm above background. Newly formed pupae kept for three days in an identical solution absorbed slightly more phosphorus; ten emerging adults averaged 80 cpm with a range of 40 to 107 cpm.

D. In order to ascertain whether the radioactivity found was the result of an actual accumulation of P^{32} by the larvae, or of contamination of the emerging adults by the rearing medium, third instar larvae were put into a solution containing 10 μc/ml. Eight days later, pupae and fourth instar larvae were removed and washed ten times in distilled water. After an additional 24 hours in distilled water, some were removed and examined. Adults emerging from the washed pupae were also examined. All proved to be highly radioactive, as shown in Table 2. A sample of the water from which these specimens were removed had an activity of 212 cpm/ml.

TABLE 2

ACTIVITY MEASUREMENTS OF WASHED LARVAE AND PUPAE AND UNCONTAMINATED ADULTS

Stage	Number counted	Cpm/individual		
		minimum	maximum	average
Fourth instar larvae	7	13,304	16,876	14,076
Pupae	6	16,878	30,952	26,230
Adults	12	4,484	82,860	27,778

Calibrations of the counting equipment in our laboratory have shown that a rate of 5×10^5 cpm is the equivalent of 1 μc of P^{32}. It can therefore be calculated from the data of Table 2 that the average accumulation of P^{32} by individuals examined as larvae was 0.03 μc in 8 days, while the resulting pupae and adults contained nearly twice as much. Calculations from Table 1 show that much higher accumulations may occur, the highest recorded being about 0.25 μc. Using a generally accepted figure (*1*) for converting curies to grams, one finds that the above values represent 1×10^{-11} and 8.7×10^{-11} g P^{32}.

Additional experiments are in progress to ascertain the minimum quantities of radiophosphorus which can be used, to elucidate further the effects of radiation on development, and explain the wide variation in the accumulation of P^{32} shown by the data in hand.

Highly radioactive mosquitoes can be produced. Larvae accumulate large amounts of P^{32}, but pupae accumulate relatively little. The radioactivity thus produced is not lost rapidly either by adult mosquitoes or by larvae and pupae transferred to a nonradioactive medium.

The method described offers a convenient way of producing marked mosquitoes for studies of dispersal and predation. Valuable data on metabolic activities of mosquitoes, the effects of beta radiation on insects, etc., may be expected from further studies.

Reference

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Neil Elbridge Gordon: 1886–1949

George Calingaert

Ethyl Corporation

My most vivid recollection about Neil Gordon is that of a wintry afternoon in the mid-thirties, when I noticed from the window of my laboratory a man with a large umbrella, an unannounced visitor approaching our lonely building with a slow but purposeful gait, paying no attention to the wind and rain which seemed determined to hamper his progress. Dr. Gordon was on that day bent on one of those missions which endeared him to all who have seen him at work: enlisting interest and cooperation for one of his projects in support of chemical progress. And as the years went by I learned how characteristic that picture was of the man.

Chemical research and the teaching of chemistry have always been the twin interests of Dr. Gordon: after obtaining his Ph.D. from Johns Hopkins University in 1917 he taught successively at his alma mater, the University of Maryland, and at Central College in Missouri and Wayne University in Michigan. His numerous publications reveal his parallel interests in the problems of teaching and in several fields of research, principally in adsorption, colloids, emulsions, and dyeing. His interest in chemists as individuals was as keen as his interest in their work, and many a young instructor or professor still remembers the help and inspiration he received from

Dr. Gordon in his first attempts at embarking upon original research. Dr. Gordon also demonstrated repeatedly his ability as an organizer, and as head of the Chemistry Department at Wayne University he succeeded in a very short time in giving new impetus to the work of the Department, and in expanding its scope to include the training of Ph.D.'s.

But in addition to a career which would have taken all the time of an ordinary man, Neil Gordon always seemed to be fired by a novel idea, to want to develop a different—and often an unorthodox—way of speeding up the wheels of chemical progress. In rapid succession he thought up these new ideas and pursued them with dogged determination, often against the resistance of the timorous, but he seldom failed to secure adequate support from those who admired him for his originality and resolution, and who instinctively trusted him because he was always giving so unsparingly of his own means and energy. In this manner he conceived, created and managed in succession:

1924—the *Journal of Chemical Education,*

1929—the National Research Fellowship Program at Johns Hopkins University,

1938—the Gibson Island Conferences of the AAAS, and

1936—the Hooker Library, which in 1942 became the Kresge-Hooker Library.

The Gibson Island Conferences were operated under the sponsorship of Section C, of which Dr. Gordon was long the secretary, and in 1948 the conferences were fittingly renamed Gordon Research Conferences. As the scroll delivered to him on that occasion states:

> Dr. Gordon has introduced a new and fruitful means for the exchange and advancement of knowledge through informal meetings held in pleasant, healthy, and friendly surroundings. His faith in his ideas and his indefatigable efforts in bringing them to pass have brought lasting benefits to the science of chemistry.

The progress of science would be slow indeed without the support of such men of vision, character, and determination. We must thank our lucky stars when one shows up, and at the same time thank ourselves for our freedoms which give the individual with an original idea the opportunity to bring it into full realization if, like Neil Gordon, he has the faith and energy to do it.

William Townsend Porter: 1862–1949

A. J. Carlson

University of Chicago

W. T. Porter was born in Plymouth, Ohio, in 1862 and received his medical training and his M.D. degree at the St. Louis Medical College in 1885. He served as acting superintendent of the St. Louis City hospital for one year, and as assistant professor and professor of physiology at the St. Louis Medical College from 1887 to 1893. During these years Dr. Porter also pursued graduate studies in Germany—Berlin, Breslau, Kiel. He was elected a member of the American Physiological Society at its fourth annual meeting in 1891. At that time probably no one could have predicted the outstanding service Dr. Porter was to render to American physiology during the following sixty years.

Dr. Porter became a member of the faculty of Harvard University Medical School in 1893, and continued a member of that faculty until his retirement in 1928. His teaching of physiology at the Harvard Medical School led him to establish the Harvard Apparatus Company, for the production of better and less expensive laboratory apparatus for both teaching and research in physiology. His work on the coronary circulation of mammals is probably his most fundamental research contribution to biology and medicine, but in his earlier years he also worked and published on growth, respiration, the nervous system, and skeletal muscle.

When Dr. Porter joined the faculty of the Harvard University Medical School physiology was taught to medical students largely by "talks and books." Fifty years later he wrote: "It was easy to say that physiology should be taught by experiments performed by the students themselves. But in 1899 the Harvard Medical School had 200 students in physiology. Working in pairs these students needed 100 kymographs. At that time this apparatus was made only in Europe, and could be imported at the cost of $200 apiece. Obviously even the richest university medical school could not meet this teaching requirement at such costs."

Dr. Porter started to meet these essential requirements for medical training by simplifying existing