



FIG. 7. Spectrum of the respiration ferment. (Crosses, x, - catalytic action on illumination with lights of equal quantum intensity).

# XI

On closer examination of the spectra of the respiration ferment and of the known hemin compounds a difference is revealed. The maximum of the blue band for the respiration ferment lies at  $436\mu$  and at  $408\mu$  for CO-hemin. The spectra of none of the known hemin compounds coincide completely with that of the respiration ferment, the latter being displaced towards the red in respect to the former.

It must be recalled here that the respiration ferment is not in solution in the cell but is embedded in the solid cellular components of the surfaces. The spectrum of the respiration ferment which I have shown is not of the dissolved but of the solid ferment, whereas the spectra of the other hemin compounds were taken from solutions. It is known that a displacement of the spectrum of a pigment would be associated with a fixation of the pigment upon the cellular substance. Thus the spectrum of chlorophyll bound to the (solid) cellular phase is displaced to  $20\mu$  towards the red in relation to the spectrum of chlorophyll in solution. This corresponds to the direction and order of magnitude of the displacement shown by the ferment-hemin in relation to the dissolved hemin. This does not mean that the state of aggregation alone determines the displacement, for the effect may also be due to chemical differences.

In concluding, I wish to acknowledge the credit due for a great part of the above described investigation to my coworkers, Mr. Negelein and Mr. Krebs.

BERLIN-DAHLEM

OTTO WARBURG

## EUGEN AMANDUS SCHWARZ

ALL entomologists will be saddened by the news that Dr. E. A. Schwarz died in Washington, of pneu-

monia, on October 15. He was born at Liegnitz, Silesia, on April 21, 1844, and was therefore more than eighty-four years of age when he died. In his early years he studied in the Universities of Breslau and Leipzig, and came to America in 1873, taking a post in the newly founded Museum of Comparative Zoology at Cambridge. On the death of the elder Agassiz, he joined his friend, Henry G. Hubbard, in the establishment of a scientific association at Detroit, Michigan. Alone or with Hubbard he made expeditions to Florida and to the Lake Superior region, and in 1877 was sent by John L. Leconte to Colorado on a collecting trip. In the summer of that year he became connected with the entomological service of the U. S. Department of Agriculture and remained under the federal government until the time of his death. Dr. Schwarz was a coleopterist by choice, but had a very wide range of knowledge concerning insects in general. He was not only a very learned man, but a most kindly one, and possessed a remarkable sense of humor. Some of his clever sayings will be quoted for years to come.

It has been said that he was the most learned entomologist in America; to his quiet influence is doubtless due much of the great advance which has been made in this country in sound and fine work. He was one of the founders of the Entomological Society of Washington, and for some years before his death he had been its honorary president. The *Proceedings* of this society for the first thirty years or more of its existence are replete with short notes and longer articles from his pen covering a vast field of biological observation.

In a way, he shunned publicity, but nevertheless was known and appreciated by a wide circle, not only of entomologists, but also of people engaged in other kinds of work. To respect for his learning were added admiration and affection for his other characteristics.

Dr. Schwarz was also one of the founders of the Biological Society of Washington. He joined the American Association for the Advancement of Science at the first Detroit meeting in 1875. I think that the published record which shows him first as a member at the first Boston meeting of 1880 must be wrong.

L. O. HOWARD

U. S. DEPARTMENT OF AGRICULTURE

## THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

### HEADQUARTERS HOTELS AND HOTEL ARRANGEMENTS FOR THE FIFTH NEW YORK MEETING

THE following information concerning hotel arrangements for the fifth New York meeting (December 27, 1928, to January 2, 1929) is supplied by

Hotels	Nearest subway station	Single Rooms (1 person)		Double Rooms (2 persons)	
		No bath	With bath	No bath	With bath
<i>Hotels near Pennsylvania Station:</i>					
Breslin, Broadway at 29th ..... (Lexington 2260)	Penn. Station	\$2.00-2.50	\$2.50-3.50	\$3.50-5.00	\$4.00-7.00
Imperial, Broadway at 32nd ..... (Lackawanna 2000)	Penn. Station	\$2.00	\$2.50-4.50	\$3.50	\$4.00-7.00
McAlpin, Broadway at 34th ..... (Pennsylvania 5700)	Penn. Station	\$2.75	\$4.00	\$5.00	\$6.50-7.00
Pennsylvania, 7th Ave. at 33rd ..... (Pennsylvania 5000)	Penn. Station	.....	\$4.00-6.00	.....	\$7.00-10.00
<i>Hotels near Times Square:</i>					
Astor, Broadway at 44th ..... (Bryant 2100)	Times Square	\$3.00-3.50	\$4.00-7.00	\$5.50	\$6.50-10.00
Lincoln, 8th Ave. at 44th ..... (Lackawanna 1400)	Times Square	.....	\$3.00-5.00	.....	\$5.00-7.00
Paramount, 46th, west of Broadway ..... (Chickering 7580)	Times Square	.....	\$3.50-5.00	.....	\$5.00-8.00
Park Central, 7th Ave. at 55th ..... (Circle 8000)	B'way, 50th	.....	\$4.00-7.00	.....	\$7.00-10.00
Piccadilly, 45th, west of Broadway ..... (Chickering 7100)	Times Square	.....	\$3.00-4.50	.....	\$4.50-6.00
President, 234 W. 48th ..... (Chickering 7904)	B'way, 50th	.....	\$2.50-3.50	.....	\$3.50-5.00
Times Square, 43rd, west of Broadway ..... (Lackawanna 6900)	Times Square	\$2.00	\$3.00	\$3.00	\$4.00
<i>Hotels near American Museum:</i>					
Bretton Hall, Broadway at 86th ..... (Endicott 8000)	B'way, 86th	\$2.50-3.00	\$3.00-4.00	.....	\$4.00-6.00
Endicott, Columbus Ave. at 81st ..... (Trafalgar 6400)	B'way, 79th	\$2.50	\$3.50	\$4.00	\$5.00
Majestic, Central Park W., at 72nd ..... (Endicott 1900)	B'way, 72nd	\$3.00	\$4.00	\$5.00	\$6.00-8.00
<i>Other hotels:</i>					
Commodore, Grand Central Terminal ..... (Vanderbilt 6000)	Grand Central	.....	\$4.00-6.00	.....	\$8.00-10.00
Marseilles, Broadway at 103rd ..... (Riverside 7680)	B'way, 103rd	\$2.50	\$3.00	\$3.50	\$4.50
Murray Hill, Park Ave. at 41st ..... (Lexington 2300)	Grand Central	\$3.00-5.00	\$4.00-6.00	\$5.00-7.00	\$6.00-8.00
Westminster, 420 W. 116th ..... (Cathedral 7100)	B'way, 116th	.....	\$2.50-3.00	.....	\$4.00-5.00

Dr. Sam F. Trelease, secretary of the local committee for the meeting.

The Hotel Lincoln will be the general headquarters hotel. It is one of the newest and best-equipped hotels in New York, located at 44th Street and Eighth Avenue, near subway and surface transportation. Many of the officers of the American Association will have rooms at this hotel, which is also headquarters for several of the societies that are to meet with the association this year.

The following list shows the headquarters hotels for the several scientific groups and the organizations in each group:

Mathematics, *Lincoln*. Section A, American Mathematical Society and Mathematical Association of America.

Physics, *Lincoln*. Section B, American Physical Society and American Meteorological Society.

Chemistry, *Lincoln*. Section C.

Astronomy, *Lincoln*. Section D and American Astronomical Society.

Geology and Geography, *Astor and Bretton Hall*. Section E, Geological Society of America, Society of Economic Geology, Paleontological Society of America and Mineralogical Society of America, all at *Astor*. Association of American Geographers and National Council of Geography Teachers, at *Bretton Hall*.

Zoological Sciences, *McAlpin*. Section F, American Society of Zoologists, Entomological Society of America, American Association of Economic Entomologists, American Society of Parasitologists and Phi Sigma Biological Research Society.

Botanical Sciences, *Lincoln*. Section G, Botanical Society of America, American Phytopathological Society, American Society of Plant Physiologists, Sullivant Moss Society and American Fern Society.

Societies related to both zoology and botany, *Lincoln and McAlpin*. American Society of Naturalists and American Microscopical Society, at *McAlpin*. Ecological Society of America, at *Lincoln*.

Anthropology, *Endicott and Park Central*. Section H, American Anthropological Association and American Folk-Lore Society, at *Endicott*. Archaeological Institute of America, at *Park Central*.

Psychology, *Pennsylvania*. Section I and American Psychological Association.

Social and Economic Sciences, *Lincoln*. Section K.

Historical and Philological Sciences, *Marseilles*. Linguistic Society of America.

Engineering, *Lincoln*, Section M.

Medical Sciences, *McAlpin*. Section N.

Agriculture, *McAlpin*. Section O, American Society of Agronomy, Society of American Foresters, American Society for Horticultural Science, Potato Association of America and Association of Official Seed Analysts.

Education, *Pennsylvania*. Section Q.

Science in General, *Lincoln and McAlpin*. American Association of University Professors and Gamma Alpha

Graduate Scientific Fraternity, at *Lincoln*. American Nature-Study Society, at *McAlpin*.

Headquarters hotels have not yet been designated by the following organizations: Metric Association, Section L, History of Science Society, Geneticists Interested in Agriculture, Gamma Sigma Delta Fraternity, Society of Sigma Xi and Sigma Delta Epsilon Graduate Women's Scientific Fraternity.

Information about the headquarters hotels, and about a few others that will be convenient and desirable for those attending the meeting, is given below. Some of the names are grouped according to the locations of the hotels. Prices are rates per day. Telephone numbers are in parenthesis.

Members planning to attend the New York meeting should reserve hotel rooms at once by writing directly to the hotels. *Do not write the local committee on arrangements.* In making reservations, state type of room desired, approximate price and date of arrival. Only by immediate reservation can a member be assured of securing the accommodations he desires. The number of lower-priced rooms in some hotels is relatively small, but rooms with twin beds are available at most hotels. Two persons sharing the same room will obtain accommodations at a rate lower than for separate single rooms. The hotel managements reply promptly to requests for reservations. If a suitable room can not be engaged at the hotel first chosen another hotel should be tried immediately.

Of course there are many more good hotels in New York than are given in the tabulation above. Information about additional hotels may be secured by addressing the office of the permanent secretary of the American Association for the Advancement of Science, Smithsonian Institution Building, Washington, D. C.

BURTON E. LIVINGSTON,  
Permanent Secretary

## SCIENTIFIC EVENTS

### RESOLUTIONS OF THE AMERICAN FISHERIES SOCIETY

THE following resolutions were passed by the American Fisheries Society at its fifty-eighth annual convention held in Seattle from September 28 to 31:

The American Fisheries Society approves the fish cultural policy of the U. S. Bureau of Fisheries and its program of biological and technological research along practical lines; and urges the adoption by congress of the five-year program recommended by the Committee on Merchant Marine and Fisheries at the last session of congress providing for the extension of the work of the Bureau of Fisheries.