Our New Chairman, Edward J. Modest
# CELLS FOR SPECTROPHOTOMETERS

## TYPE I
- **Cell with fitted cover. Satin finish on two sides.**
- **Lightpaths:** 1, 2, 5, 10, and 40 mm.
- **Outside dimensions:** 45 mm high, 12.5 mm wide.

<table>
<thead>
<tr>
<th>OPTICAL PATH LENGTH IN MM</th>
<th>Q SILICA UV GRADE</th>
<th>I SILICA IR GRADE</th>
<th>QG FUSED SILICA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>33.00</td>
<td>31.00</td>
<td>24.00</td>
</tr>
<tr>
<td>2</td>
<td>33.00</td>
<td>31.00</td>
<td>22.50</td>
</tr>
<tr>
<td>5</td>
<td>33.00</td>
<td>31.00</td>
<td>22.50</td>
</tr>
<tr>
<td>10</td>
<td>32.00</td>
<td>30.00</td>
<td>22.50</td>
</tr>
<tr>
<td>40</td>
<td>48.00</td>
<td>45.00</td>
<td>36.00</td>
</tr>
</tbody>
</table>

## TYPE 9
- **Semi-micro cell with fitted cover.**
- **Satin finish on two sides. Inside width 4 mm.**
- **Lightpaths:** 5, 10, and 40 mm.
- **Outside dimensions:** 45 mm high, 12.5 mm wide.

| 5                         | 36.00             | 29.50             | 25.00           |
| 10                        | 36.00             | 29.50             | 25.00           |
| 20                        | 40.00             | 34.50             | 34.00           |
| 40                        | 50.00             | 43.00             | 38.00           |

## TYPE 17
- **Micro cell with fitted cover.**
- **Inside width:** 2 mm.
- **Lightpaths:** 5, 10, 20 and 40 mm.
- **Outside dimensions:** 25 mm high, 12.5 mm wide.

| 5                         | 37.50             | 33.00             | 25.00           |
| 10                        | 37.00             | 33.00             | 25.00           |
| 20                        | 42.00             | 38.00             | 30.00           |
| 40                        | 50.00             | 45.00             | 40.00           |

## TYPE 21
- **Same as Type 1, but with tapered teflon stopper.**

| 1                         | 45.00             | 39.00             | 33.00           |
| 2                         | 45.00             | 39.00             | 33.00           |
| 5                         | 46.00             | 39.00             | 33.00           |
| 10                        | 46.00             | 39.00             | 30.00           |
| 40                        | 59.00             | 53.00             | 50.00           |

## TYPE 32
- **Cylindrical cell with one stopper.**
- **Lightpaths:** 10 and 20 mm.
- **Outside Diameter:** 22 mm.

| 1                         | 54.00             | 45.00             | 29.00           |
| 2                         | 54.00             | 45.00             | 29.00           |
| 5                         | 52.00             | 43.00             | 28.00           |
| 10                        | 40.50             | 36.50             | 31.00           |
| 20                        | 41.50             | 37.50             | 31.00           |

## TYPE 34
- **Cylindrical cell with two stoppers.**
- **Lightpaths:** 50 and 100 mm.
- **Outside diameter:** 22 mm.

<table>
<thead>
<tr>
<th></th>
<th>Guaranteed Transmittance</th>
<th>Permissible Deviation in Matching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Far UV Silica &quot;Q&quot;</td>
<td>at 200 mu about 85%</td>
<td>at 200 mu max. 2%</td>
</tr>
<tr>
<td>IR Silica &quot;I&quot;</td>
<td>at 220 mu about 80%</td>
<td>at 220 mu max. 2%</td>
</tr>
<tr>
<td>Standard Silica &quot;QQ&quot;</td>
<td>at 250 mu about 80%</td>
<td>at 250 mu max. 2%</td>
</tr>
<tr>
<td>Optical Glass &quot;G&quot;</td>
<td>at 320 mu about 75%</td>
<td>at 320 mu max. 1%</td>
</tr>
</tbody>
</table>

**Optical Path Length in mm:**
- 1
- 2
- 5
- 10
- 40
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Forms close for advertising on the 5th of the month and for text on the 1st of the month preceding issue.

THE COVER

OUR NEW CHAIRMAN

Featured on the cover this month is a picture of Doctor Edward Julian Modest, the new chairman of the Northeastern Section, A.C.S. He is taking on the reins of responsibility from Dr. Ernest Becker our retiring chairman. Article on page 5.

EDITORIAL

On the cover you will notice a new device. It commemorates the diamond (seventy-fifth) anniversary of the Northeastern Section. To celebrate this event, Dr. Robert Eddy of Tufts University and Dr. Edward Atkinson of Arthur D. Little, Inc., are writing a special series of articles which will be published each month in The Nucleus. The series was arranged for Mrs. Luella Wadsworth, assistant editor of The Nucleus.

In addition, some special events will be scheduled later this year. See The Nucleus in later issues for details.

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THE RENAISSANCE OF LIQUID CHROMATOGRAPHY

by

BARRY L. KARGER

Department of Chemistry
Northeastern University
Boston, Massachusetts 02115

This lecture will review the principles of high performance liquid chromatography and cite recent advances from our laboratory. We shall first describe the basis upon which new packing materials, e.g. porous layer beads and 5-10μ silica particles, are based. Optimization of column parameters for adequate separation in minimum time will next be explored. We will show that performances comparable to capillary columns in gas chromatography (GC) are possible in modern liquid chromatography (LC). Many workers believe that modern LC is not as sensitive a tool as GC; however, we will illustrate that it is possible to achieve LC sensitivities comparable to flame ionization detection in GC. If one optimizes conditions for minimum column dilution, we will next turn to applications of this new separation tool to organic chemical and biomedical problems. Separations will be shown of the phenylthiohydantoin derivatives of amino acids as well as analyses of body fluids (e.g. urine). Finally, we will suggest some future trends in high performance LC.

PHYLILIS R. BROWN
Assistant Professor
Brown University

Education:
1940-1942 Simmons College
1944 B.S. George Washington Univ.
1968 Ph.D. Brown University
NIH Special Research Fellow 1967-68
Union Carbide Fellow 1966-67
University Fellow 1965-66

Experience:
1968 - Brown University
1945-46 Harris Research Laboratory
1944-45 Geophysical Laboratory, Carnegie Institute
Summer 1943 NIH, Department of Toxicology

Membership in Professional and Honorary Societies:
American Chemical Society
Member of
Division of Medicinal Chemistry
Division of Organic Chemistry
Division of Biochemistry
Division of Analytical Chemistry

Dr. Brown has over twenty-five papers published in biochemical and biomedical applications of chromatography. She has been very active in community volunteer work.

ANALYTICAL GROUP
FEBRUARY 22, 1973

Dr. Wayne Matson of Environmental Sciences Associates, Burlington, will be speaking on anodic stripping voltammetry applied to environmental problems.
JAMES N. LITTLE
Vice President
Waters Associates, Inc.
Framingham, Mass.
B.S.—University of Kansas—Chemistry
Ph.D.—M.I.T.—Analytical Chemistry
(Supervisor Dr. D. N. Hume)
Hercules Inc., Wilmington, Delaware
Research Chemist, 1966-1968
Waters Associates Inc., Framingham, Massachusetts
1968-1969, Senior Research Chemist
1969-71, Manager, Chromatography Research
1971—Vice President
Dr. Little has been involved in Liquid Chromatography for over 10 years. He has specialized in the development of new chromatographic packings, analytical and preparative applications of liquid chromatography and polymer characterization using Gel Permeation Chromatography.
Dr. Little has over 20 publications and patents relative to liquid chromatography and serves as a reviewer for papers dealing with liquid chromatography and polymer characterization for four leading journals. He has been an invited lecturer at universities, symposia and government agencies both here and abroad.

RONALD A. HITES
Assistant Professor
Department of Chemical Engineering
Massachusetts Institute of Technology
Education:
Oakland University, Rochester, Michigan, 1960-64; B.A. Magna Cum Laude with Departmental Honors.
Postdoctoral Experiences:
National Research Council Fellowship at U.S. Department of Agriculture, Northern Regional Research Laboratory, Agricultural Research Service, Peoria, Illinois; September 1968 to October 1969.

Massachusetts Institute of Technology, Department of Chemistry; October 1969 to July 1972; Participation in Molecular Analysis Science Team of the Viking Project (Mars Lander, 1975-76); Trainor, N.I.H. Training Grant in Biophysical Sciences.
Dr. Hites has nine publications in which he applies analytical chemistry to various fields.

COMMITTEE ON PROFESSIONAL RELATIONS
MEMBER ASSISTANCE
GUIDELINES NEXT MONTH

PROJECTED 1973 MEETINGS
This is our Diamond Jubilee Year — 75 years young. Let's make every month a reminder.

February 8:
All the topical groups will meet on this date.
Alan C. Nixon, President, American Chemical Society, will be with us.
To be held at Emmanuel College, Marian Hall, 400 The Fenway, Boston.

March 8:
Topic: Taming American Technology.
Lewis M. Branscomb, Vice President and Chief Scientist, IBM. Introduced by Leonard Soltzberg, Simmons College, who will say a few words about coping with alienation in a technological society.
Place: M.I.T. Faculty Club. Social Hour — 5:30, Dinner — 6:30.

March 29:
Gerold Schwarzenbach, Swiss Federal Institute of Technology, Zurich, Switzerland. One of the foremost chelate chemists in the world.
Place: MIT Faculty Club. Preprandial Hour — 5:30, Dinner — 6:30.
Evening meeting, 8:00, Room 54-100, Polynuclear Metal Complexes.

April:
National Meeting - no local meeting.

May 10:
"Student Night" and a superb lecturer in the evening. Afternoon student research papers, 3:00 p.m. Social Hour, 5:30. Dinner, 6:30.
8:00 p.m. Werner Stumm, Environmental Scientist from Zurich, Switzerland. Director: Swiss Federal Institute for Water Resources and Water Pollution Control – Dubendorf, Switzerland. Topic: Energy, the Chemist and the Environment.
Place to be announced.

June 18:
ACS at Pops. We will make it very special because this is our 75th year. Dinner plans to be announced.

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ATTLEBORO, MASSACHUSETTS 02703

NUCLEUS—JANUARY 2
Jan. 4 Board of Directors Meeting, Northeastern Section, Norris Room, M.I.T.
Jan. 11 583rd Meeting of the Northeastern Section, ACS, with the Analytical Chemistry Group: Dr. Barry Rager, Northeastern University, High Pressure Liquid Chromatography, 8:00 p.m., 365 Eli Center. Afternoon Symposia: 2:30 James N. Little, moderator. Participants: Phyllis Brown and Robert Tour, 335B Eli Center. Preparadial Hour, 8:30, 365A Eli Center and Dinner, 6:30, 355B, Eli Center. The price of the dinner will be $4.00, students $1.50. Cocktails at 5:30.

Jan. 17 Medicinal Chemistry Group Meeting: Dr. Haldean C. Dalzell, "Synthesis of Tetrahydrocannabinol Metabolites and the Application of High Pressure Liquid Chromatography to the Cannabinoids". Dinner: Harvard Faculty Club, 20 Quincy St., Cambridge, at 6:00 p.m. The price of the dinner will be $4.00, students $1.50. Cocktails at 5:30.

Feb. 1 Board of Directors Meeting, Northeastern Section, Norris Room, M.I.T.
Feb. 25 Society of Cosmetic Chemists.

Feb. 8 584th Meeting of the Northeastern Section, ACS, Marion Hall, Emmanuel College, Boston. All the topical groups will meet on this date. Alan C. Nixon, President, ACS. Subject to be announced.
Feb. 10 NEACT Meeting in Southern Division.
Feb. 22 Society of Cosmetic Chemists.
Feb. 22 Analytical Group Meeting: Dr. Wayne Matson of Environmental Sciences Associates, Burlington, will speak on Anodic Stripping Voltammetry Applied to Environmental Problems.

Mar. 1 Board of Directors Meeting, Northeastern Section, Norris Room, M.I.T.
Mar. 5-9 Pittsburgh Conference in Cleveland.
Mar. 8 586th Meeting of the Northeastern Section, ACS, at M.I.T. Faculty Club, Lewis H. Branscomb, vice-president and chief scientist, IBM. Topic: Taming American Technology. Branscomb will be introduced by Leonard Soltzberg, Simmons College, who will say a few words about coping with alienation in a technological society. Social Hour, 5:30 and dinner at 6:30.
Mar. 13 Elastomers and Plastics Group Meeting at U.S. Army Natick Labs. Tour and dinner.

Mar. 13 The Electrochemical Society. Dr. David A. Vermilyea, vice-president of the Electrochemical Society, to be announced.
Mar. 22 Society of Cosmetic Chemists.
Mar. 29 586th Meeting of the Northeastern Section, ACS, at M.I.T. Faculty Club. Gerald Schwarzenbach, Swiss Federal Institute of Technology, Zurich, Switzerland, one of the foremost chelate chemists in the world. Preparadial hour, 5:30, dinner at 6:30, meeting at 8:00, Polynuclear Metal Complexes.
Apr. 5 Board of Directors Meeting, Northeastern Section, Norris Room, M.I.T.
Apr. 7 NEACT Meeting in Northern Division.
Apr. 8-13 356th National Meeting of ACS to be held in Dallas, Texas.
Apr. 26 Society of Cosmetic Chemists.
May 3 Board of Directors Meeting, Northeastern Section, Norris Room, M.I.T.
May 6 NEACT Annual Meeting in Central Division.
May 10 587th Meeting of the Northeastern Section, ACS. "Student Night": 3:00 p.m. — afternoon student research papers; 8:00 p.m. — Weir-C. Stumm, environmental scientist from Zurich, Switzerland. Director: Swiss Federal Institute for Water Resources and Water Pollution Control, Switzerland. Topic: Energy, the Chemist and the Environment. Place to be announced.
May 29 The Electrochemical Society. Prof. M. S. Dresselhaus, M.I.T., Cambridge. Subject to be announced.
June 17 National Organic Symposium at -23 Florida State University, Tallahassee.
June 18 ACS at the Pops. Dinner plans to be announced.
Aug. 13 NEACT 35th Summer Conference, -17 Univ. of Maine, Gorham.
Aug. 26 166th National Meeting of the -31 ACS will take place in Chicago.

**ABSTRACT**

**DR. HALDEAN C. DALZELL**
Sheehan Institute for Research and Sharps Associates
Cambridge, Massachusetts

**Synthesis of Tetrahydrocannabinol Metabolites and the Application of High Pressure Liquid Chromatography to the Cannabinoids**

A large number of metabolites of Δ⁹-tetrahydrocannabinol (THC), some having high physiological activity, have been isolated and identified. Synthetic routes to these metabolites are needed to supply sufficient material for further biological evaluation. The synthesis of 7-hydroxy-Δ⁹-THC, an important active metabolite in man, and other THC metabolites will be discussed. The separation of 7-hydroxy-Δ⁹-THC from its Δ⁹-isomer has been carried out using high pressure liquid chromatography, a technique showing much promise in the Cannabinoid field.

**MEDICINAL CHEMISTRY GROUP**

**DR. HALDEAN C. DALZELL**

Synthesis of Tetrahydrocannabinol Metabolites and the Application of High Pressure Liquid Chromatography to the Cannabinoids

The lecture will be given in the auditorium of Arthur D. Little, Inc., Acorn Park (Route 2), Cambridge, Ma., at 8:00 p.m. on Wednesday, January 17. All interested are invited to join the Executive Committee of the Group and the speaker for dinner at the Harvard Faculty Club, 20 Quincy Street, Cambridge, at 6:00 p.m. The price of the dinner will be $4.00 (Students $1.50). Cocktails are served from 5:30 at a nominal cost. Parking is available at the Hurlbut lot on Prescott Street at the corner of Harvard Street. To make dinner reservations please send a post-card to Dr. Felix Granchelli, Arthur D. Little, Inc., Acorn Park, Cambridge, Ma. 02140, or call him at 864-5770 Extension 2984 before noon on Tuesday, January 16.

**BIOGRAPHICAL SKETCH**

Dr. Haldean C. Dalzell was born in Neche, North Dakota, in 1940. He attended the University of North Dakota where he received a B.S. in Chemistry degree cum laude with departmental honors in 1962. He entered graduate school at Cornell University as a Sage-­Teeple Graduate Fellow and received a Ph.D. degree in 1966. He joined the faculty of the Massachusetts Institute of Technology as Assistant Professor of Chemistry in 1966 and continued there as Research Associate in 1967-­70. In February of 1971 he joined the Sheehan Institute for Research and Sharps Associates (SISA) where he has been involved in the synthesis of compounds affecting the central nervous system. Dr. Dalzell is a member of the American Chemical Society, Sigma Xi, and the Northeastern Section of the American Chemical Society.
While still an undergraduate, he worked in medicine at the Massachusetts General Hospital. During this period, he completed his A.B. in Chemistry (cum laude) in 1943. He carried on graduate studies in Harvard University winning the doctorate in chemistry, in 1948, with a thesis, under the direction of Professor Louis F. Fieser, dealing with the "Condensation of Thiethyl and Phenacycloalkenes with Maleic Anhydride". While still an undergraduate, he worked on a synthetic rubber project in the Frederick S. Bacon Laboratories in Watertown, Massachusetts. His graduate studies were interrupted by three years active duty with the U.S. Navy, 1943-1946. His service was principally as Lt. (j.g.) USN, Chief Engineering Officer, USS George E. Davis (DE 357).

Summer employment in 1946, on cancer chemotherapy research with Doctors A.M. Seligman and O.M. Friedman, Harvard University, appears to have had much to do with a decision for his later career at the Children's Hospital Medical Center in Boston where, since 1952, he has been head of the laboratories of Organic Chemistry, the Children's Cancer Research Foundation in Boston. Beginning in 1956, he has been a Research Associate in Pathology in the Harvard Medical School and since 1958 he has served on the editorial board of the "Year Book of Cancer." From 1950-1962 he was a special consultant, National Cancer Institute, National Institutes of Health and a member of the chemistry panel, Cancer Chemotherapy, National Service Center, National Cancer Institute. In 1961-1962 he was a liaison member to Biochemistry Committee of the same service center.

Since 1963 Dr. Modest has been a member of Radiation Safety Committee at The Children's Hospital Medical Center, Boston and since 1965, a consultant, National Cancer Institute, National Institutes of Health. In 1967 Dr. Modest was chairman of the Medicinal Chemistry Group, Northeastern Section, ACS. He is now a member of the Editorial Board of the Journal of Medicinal Chemistry and Adjunct Professor of Pharmaceutical Chemistry, University of Rhode Island at Kingston, Rhode Island. Since 1969 he has been an Associate in Pathology in the Harvard Medical School.

NORTHEASTERN SECTION, ACS BOARD OF DIRECTORS' MEETING October 5, 1972

The regular monthly meeting of the Board of Directors of the Northeastern Section of the American Chemical Society was held on October 5, 1972 in the James Ford Norris Room of the Dreyfus Building at MIT. Directors present were: Dr. Ernest I. Becker, Dr. Edward R. Atkinson, Richard W. Boyden, Dr. Phillips A. Brauner, Sister Mary Emily Cahill, Dr. William E. Case, Dr. G. Richard Handrick, Dr. Arno H. A. Heyn, Dr. Henry A. Hill, Dr. Esther Hopkins, Dr. David M. Howell, Dr. Edward F. Levy, Dr. Stephen A. Leone, Sister Magdalen Julie Wallace, Russell T. Werby. Also in attendance were Dr. Lester Arond and administrative secretary, Mrs. Gloria LoConte.

The meeting was called to order at 4:15 p.m. Dr. Becker welcomed the members of the Board to the first official meeting of the academic year. The motion to accept the report of treasurer Richard Boyden was unanimously passed.

Dr. Becker proceeded with several important announcements:
1—Following the resignation of Wallace Gleeckman as chairman of the Chemical Education Committee, Dr. Donald Clagett of Northeastern University was appointed to serve as chairman for the remainder of the term. The Board unanimously approved the appointment. The work of the Committee is proceeding and the selection of sub-committee chairmen is in progress. (Wally Gleeckman is on sabbatical leave in Israel.)
2—Dr. Peter Cannon has been named chairman of the PEP drive for the Northeastern Section and organization of the drive is underway. The appointment, requested by the Washington office, was unanimously approved by the Board. (Dr. Hill expressed his dissatisfaction with the general operation of the program. He wished to go on record as seeing it an amorphous program.) Dr. Becker has sent letters regarding this to both Dr. Tishler and Dr. Nixon.

3—Dr. Walter Kornfeld, former president of the Unemployed Chemists' Club left the Northeastern Section on September 23. Dr. Delyle Eastwood, named to replace him, will likewise be leaving the Section. No further appointment will be made but the members will be asked to choose their own president. Dr. Lester Arond is liaison officer between the Professional Relations Committee and the Club. Several job openings have been referred to the members.

4—Dr. Attila Pavlath recently telephoned the administrative secretary requesting permission to purchase a computer run-off of the mailing list of the Northeastern Section for Dr. Bernard Friedman. The subject was opened to discussion and many options were expressed. A motion to make the mailing list available to Pavlath but to inform the other candidates that this was being done was seconded, discussed, and voted upon. The motion failed to carry with 2 in favor, 9 opposed and 1 abstention.

Dr. Becker will send a notice of the Northeastern Section's action to Dr. Pavlath and to all local Section chairmen. The same problem has been faced by other Sections with a variety of responses from them.

Constitution and By-Laws

Dr. Atkinson, chairman of the Committee, indicated that some proposed by-law changes will be submitted at the November meeting. Any further suggestions for the Committee should be communicated in writing to Dr. Edward Atkinson at Arthur D. Little, Inc.

Program

Dr. Saul G. Cohen of Brandeis University will be the recipient of the James Flack Norris Award at the No-
nember meeting to be held at Northeastern University. Presentation of the award will be made by Dr. Paul Bartlett, Medicinal Chemistry Group.

**Public Relations**

1—Dr. Howell reported some difficulty in getting information from certain of the Topical Groups. Their meetings will be publicized in The Nucleus if notice of them is received prior to the first of each month by Editor David Howell.

2—The time slot allotted to the "Men and Molecules" program seems most unreasonable. A flurry of letters to the radio station expressing dissatisfaction on the part of a potential audience was suggested.

**Trustees**

Russell Werby reported for the Trustees on the present condition of the Income Accounts of the Richards Medal Fund, the Permanent Trust Fund, the Publications Trust Fund, and the Norris Award Fund. The relatively low balances must be kept in mind in looking to future utilization of the funds.

**Nucleus**

As business manager of The Nucleus, Russell Werby welcomed back Dr. Philip Brauner who has been on sabbatical leave. He reported that apart from two outstanding balances, all bills of The Nucleus have been paid up to date. Cash on hand is in the amount of $89. Elaborating on the anticipated expenses for the rest of the year compared to the anticipated income, Mr. Werby showed that a deficit of about $2,000 would be faced. He, therefore, made the following two motions which were duly seconded:

1—that the sum of $1,000 be appropriated from the Income Account of the James Flack Norris Trust Fund to help cover expenses of the issues of The Nucleus devoted to the presentation of the James Flack Norris Award;

2—that the Board of Trustees be authorized to make available the sum of $1,000 from the Income Account of the James Flack Norris Award Trust Fund to help cover expenses of the issues of The Nucleus devoted to the presentation of the James Flack Norris Award.

These two motions were passed unanimously.

Mr. Werby then proposed two other motions duly seconded and passed by the Board:

1—that the sum of $1,000 be appropriated from the Income Account of the Publications Trust Fund to assist in meeting the publication expenses of The Nucleus for the remainder of 1972;

SEVENTY-FIVE YEARS WITH THE NORTHEASTERN SECTION

Our Section is fortunate because its archives contain some priceless documents. We have at hand the original Secretary's Reports, of both Regular and Executive Committee meetings and these are more or less complete from the beginning in 1888 until 1921. The NUCLEUS began publication in 1924, and as long as bound copies of every issue known to have been printed. The Treasurer's records are not nearly so complete, but in the files, is the important first book, with a careful accounting of the way things were in the early years. If we add to these a historical issue of the JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, published in 1892 to celebrate the National Society's Fiftieth Anniversary, we can produce a wealth of material that would entice and challenge even the most casual student of history.

In an attempt to share some of these treasures with our present day members, an impromptu Committee has organized itself. Under the joint leadership of Dr. Edward R. Atkinson, and Dr. Robert D. Eddy this Committee will attempt, during our Diamond Jubilee Year, to assemble a series of articles about our past. There will be no attempt to make this a definitive history of the Section: that would be a prodigious task. Instead, we shall share with you a little of what we find and what we remember, as fancy pleases us. We can hope, too, that our efforts may induce others with fond memories to share them with us. The Society history mentioned above, is all the better because a few of those who were there were willing to write down some of their own recollections.

The Editor of the NUCLEUS has been kind enough to provide this Committee with publication space. In each of the nine issues of the Diamond Jubilee Year, we shall dwell on some facet of our history, trying to remember and honor the participants in some fragment of our illustrious past.

Without wishing to commit ourselves irrevocably, we have drawn up a tentative schedule as follows:

- **February** — The Early Years (1888-1930)
- **March** — The Later Years (1930-1972)
- **April** — National ACS Leaders from the Northeastern Section
- **May** — Chairmen of the Northeastern Section
- **June** — The Richards Medal
- **October** — The James Flack Norris Awards
- **November** — The Nucleus and Avery Allen Ashdown
- **December** — Famous and Infamous Section Meetings

Those readers who have personal contributions to offer on these, or other topics, should send them, either to the Section Office at Tufts or to Dr. Atkinson at Arthur D. Little, Inc., Acorn Park, Cambridge, Mass., 02140. Complete articles, as well as little anecdotes, will be welcomed. However, remember that the Committee is working against a first of the month deadline: that is, the first-of-the-month preceding publication.

Our story is not just a dry summary of events and their dates. It is the story of the lives, and the dreams, and the accomplishments of people. They are (Continued from preceding column)
not just ordinary people, either; they are the giants upon whose shoulders we all stand. How many of our members have been much-loved teachers to generations of students? How many of our officers have served the Section organization with distinction, and have then stepped upward to make a permanent mark on the national scene? How many of our speakers, and medalists, have won acclaim, both nationally and internationally, for the brilliance of their scientific efforts? The answers to these questions are not trivial; they demonstrate better than anything else could that we have a glorious past. May we cherish it, and take heart from it, and build upon it to fashion a similar, glorious future.

Though many of our records are couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative couched in the terse, undemonstrative way the audience welcomed its guest speaker by breaking forth in song? Did you ever hear of a pantomime, presented by a bevy of talented Simmons girls. And some unscrupulous soul accumulated a tidy profit by distributing, in exchange for ten cents, copies of an underground newspaper called "The Nude L'il Cuss". And when it was all over, the exhausted revelers had to rush to catch the late train home.

Because there is so much of interest to report, not only about the early years of our Section, but of the national events that preceded its formation, we shall spend much of this first installment in setting the stage. Later on, we can build upon this base to focus more carefully on the individuals involved, their accomplishments, and the effects that their work has had on later generations.

The Organization of the Northeastern Section

The first page in the Secretary's book bears the date: February 4, 1898, but this was not the beginning. The American Chemical Society was founded more than twenty years before that, on April 12, 1876. Nor was that a starting date, either. Most observers agree that the real beginning of everything was a suggestion made by Dr. H. Carrington Bolton of the Columbia College School of Mines in April 1874. He wasn't thinking about forming a society at all: serendipity was in charge of things then, even as it is now. What Dr. Bolton wanted to do was to commemorate the discovery of oxygen by Joseph Priestley, one hundred years earlier. It was on August 1, 1774 that the good Doctor Priestley had heated his "mercurius calcinatus per se" with a twelve inch burning lens, and for the first time had released some "dephlogisticated air". Because this discovery had been followed by his "fluid"er's" quantitative treatment of it, had led to the oxygen theory of combustion and the subsequent development of all modern chemistry. Dr. Bolton thought that the centennial deserved some sort of observance. After all, because of his rashly liberal views, Dr. Priestley had lived and where he was buried. This suggestion was immediately adopted, and plans went forward for a three-day meeting beginning on July 31, 1874. This was the sequence of events that brought seventy-seven of the most influential American chemists, some with wives and children, together in a peaceful little village in the valley of the Susquehanna. There was no hotel there: the participants were quartered overnight by the villagers, some of whom were direct descendants of Joseph Priestley himself. Historical papers and technical papers were presented in the tiny public schoolhouse. Cablegrams were exchanged with Birmingham, England, and commemorative exercises were held besides Priestley's grave. It was a remarkable affair. The kindliness and fellowship and excitement were so great, that there was a strong sentiment to carry on with such meetings. On the second day, the Centennial Day to be exact, a group met to consider the feasibility of forming a national American Chemical Society with this purpose in mind. There were pessimists present, but nearly everyone went home with great hopes, expecting that a society would soon be formed. It was only a couple months later. There was a two-hour delay, but the NUCLEUS was not to die. Professor Charles F. Chandler, also of the Columbia School of Mines, who had presided at the Centennial Program, finally set things moving again. He uncovered more than one hundred chemists in New York and nearby cities, whose work and training rendered them eligible for membership in a chemical society. With seven confederates, he finally sent out a notice for an organization meeting to be held on April 6, 1876. That meeting was called to order with thirty-five chemists present, and the Society began operations.

To briefly: A Society created in this way was a New York based organization. It had non-resident members, but the monthly meetings were held in New York, and there were not many benefits for the out of towners. A Journal was published, but few cared to submit papers, and the Society was most successful as a local organization. Small wonder that other quite similar local organizations sprang up in other parts of the Country. There was a constant agitation to get a truly national organization going: for a while it seemed likely that some of these upstart outsiders might be strong enough to take over. But the New York group had the numbers, and they had the charter, and it was apparent that the best solution was to put some new direction in this inefficient organization. The turnabout came in 1889, when the officers sent out a letter asking for suggestions as to the best way that the Society could become more useful to their non-resident members.

Upon receiving his letter, Professor Charles E. Munroe, of Newport, Rhode Island, a charter member, sat down and wrote a detailed and lengthy response. He reviewed, quite critically, the situation as it existed for outsiders, and made a number of valuable suggestions. These included the ideas, that local Sections should be formed, and that General Meetings should be held outside of New York. Others had independently proposed the same ideas or at least concurred in them, so on June 6, 1890, the Constitution was changed to legalize such practices. One would have thought that such immediate action would have been taken, but that was not the case. According to Professor Munroe's article in the Fifty-Year History, the Directors waited until July 22 of that same year to decide that (1) there would be a General Meeting outside of New York, that (2) it would be two weeks hence on August 6 and 7, 1890, that (3) it would be in Newport, R.I., and that (4) Charles E. Munroe would be in charge of arrangements. They let him know.

Instead of collapsing under such sum-
mary treatment, he scrambled around, formed a local Committee of fourteen and began to make plans. His colleagues included a couple of Harvard Professors with summer residences in the area, Joseph Leffingwell and Mr. O'Brien, stationed nearby, the local High School Principal, the Secretary of the Newport Natural History Society, and a few younger chemists working in the area. This group put together a remarkable program, without any idea of who, or how many, would attend. As a matter of fact, the final day, when the Fall River Line boat from New York came plowing into its Newport berth, the only registrants known to be coming were the three guests whom Professor Munroe had invited to stay at his home. However, there proved to be a large and congenial group aboard, headed by Professor Chandler himself, and the meeting got off to a great start. Rhode Islanders from Providence and Kingston appeared, and there were distant visitors from Medford, Cambridge, New Haven, Ithaca and points even further afield. Seventeen papers, covering almost every possible branch of chemistry and the U.S. Naval Torpedo Station permitted an inspection of its laboratories and workshops, and its personnel presented an extensive series of demonstrations of high explosives. Not to be outdone, the personnel of the U.S. Naval Training Station put on a parade honoring their distinguished guests. On the second day of the meeting, the registrants had their choice of relaxation: they could take a leisurely tour of Newport Harbor in the inspection launch, or they could select a thirty-mile run around Conanicut Island in the high speed torpedo boat, "Stiletto".

With this successful venture completed, the chemists of Rhode Island wasted no time in getting behind Professor Munroe, and his colleague, Professor John Howard Appleton of Providence to form the Rhode Island Section. Their charter was granted on December 27-28, 1891, a full nine months before the tenth General Meeting was held in Boston. Its background is closely connected to the April 22-23, 1898, is close. Perhaps it was because Committee C (Chemistry) of the American Association for the Advancement of Science had been formed and grown strong following the Priestley Centennial, and was claiming the loyalty of the Boston, Cambridge and Worcester fraternity. It is possible that the nearby Rhode Island Section was strong enough to capture the interest of this fraternity from our area. Or the converse could have been true: perhaps that group was so insecure that no one wanted to add to its problems by setting up a rival group only fifty miles away. Our records do not say. They begin: "Friday Evening, February fourth (1898) about one hundred and fifty chemists met at the Parker House to establish a local section of the American Chemical Society".

The date 1898 was added later, with a care, by a different hand in a different colored ink. However, there can be no doubt concerning it, for the Treasurer's records are carefully dated. A remark attributed by the Secretary to the newly elected Treasurer — that he "already had about ninety dollars" is corroborated by the Treasurer in the very first entry. On the very first page of his book we find "Feb. 26, 1898. Drew $90.61 from account of $91.61 with the North End Savings Bank*, Book #13384, which had been made from the unexpended balance of the subscription raised to entertain the American Chemical Society at the Tenth General Meeting held at Boston, Dec. 27-28, 1894. Paid therefrom for this book, $1.75. Deposited with Metropolitan National Bank** $88.86".

The Secretary's minutes then go on to tell us that Henry P. Talbot of M.I.T. (in Boston then) was elected Temporary Chairman. He appointed H. J. Williams of Boston (161 Tremont Street) to be Temporary Secretary. Under their direction, the group first voted that they should be governed by a President, Vice-president, Treasurer and Secretary, and by an Executive Committee. Then began an election to fill these offices. Arthur A. Noyes of M.I.T. was chosen to be the first President. Once he had been elected, he took the chair, and presided over the selection of L. P. Kinnicutt of Worcester (Poly-technic Institute) as Vice-president, Willis R. Whitney of M.I.T. as Secretary, and B. F. Davenport of Boston (also 161 Tremont Street) as Treasurer. With the officers chosen, the next problem was that of selecting an Executive Committee. A nominating Committee was appointed by the President, there was a recess of twenty minutes; they deliberated a state of eleven names was presented, with five to be chosen. The winners were John Alden of the Pacific Mills in Lawrence, H. Carmichael of Boston (12 Pearl St.) Arthur D. Little of Boston (7 Exchange Place), John Shaw of Boston (40 India Wharf) and H. P. Talbot.

The Secretary continues, describing the actions taken. First the President was empowered to appoint a Committee on By-Laws, second, the territory of the proposed Section was defined as the states of Massachusetts, New Hampshire, Vermont and Maine, and third the Executive Committee was instructed to propose a suitable name. Then we come to a most prophetic entry. In his last sentence, the Secretary writes, for the first time in our minutes, the beginning and the end of a sentence that has been written or recast by every subsequent Secretary, reporting on nearly every one of the more than five hundred and eighty business meetings that have been held over these seventy-five years. "Owing to the lateness of the hour, it was decided to postpone . . . and the meeting was then adjourned." What was postponed? It was the reading of the scientific papers that everyone had wanted to hear!

ROBERT D. EDDY

*Whatever happened to that $1.00 that was left behind? Has it been out at compound interest all these years, waiting until now to become a secret annuity to the annual Budget Committee? Perhaps, but there is no "North End Savings Bank" listed in the latest Boston Telephone Book.

**There is no Metropolitan National Bank in the Telephone Book, either.

Here, in the first two paragraphs, we have ample evidence that extraordinary teachers have always been concerned with the Section's Affairs. Dr. Talbot's text: "Qualitative Chemical Analysis" was first published in 1897. This text, first revised by him, and later revised by our own Leicester F. Hamilton and Stephen G. Simpson, has gone through twelve editions. Dr. Noyes' text: "Qualitative Chemical Analysis" was also first published in 1897. This has been through ten editions. The most recent revision is by Ernest H. Swift of the California Institute of Technology. The Macmillan Company, publisher of both texts, has continuously listed them prominently in its catalogues right up to the present day.

It is important to note that this election was just the beginning of service to the ACS for many of these elected. Noyes was President of the National Society in 1904, Kinnicutt was Chairman of the Section in 1901, Whitney was President of the Society in 1909, Little was Chairman of the Section in 1912 and President of the Society in 1912 and 1913, Alden was Chairman of the Section in 1900 and Talbot was Chairman of the Section in 1916. One of the losers in the election, J. Russell Williams of Worcester, was Section Chairman in 1913.
With the Student Affiliates

Dr. T. S. Light—The Foxboro Company

ACS—Northeastern Section

Coordinator for the Student Affiliates

This is your column
What did you do?
What are you doing?
What will you be doing?
Keep the news coming!

Please

The ACS Student Affiliate groups of area colleges met on October 30, 1972 at Simmons and Emmanuel Colleges. The afternoon meeting at Simmons College was devoted to a talk by Mrs. Helen Free, a vice-president of The Ames Company, division of Miles Laboratories. Mrs. Free’s talk was entitled “You’ve Come a Long Way, Baby”.

After dinner at Emmanuel College, the evening session was highlighted by an exchange of ideas among the students representing the different Student Affiliate groups. Activities for the coming year and fund-raising ideas were prominent subjects of discussion. Much consideration was given to the possible benefits of joint activities. Dr. Light, chairman of the NESACS Education Committee, promised to issue a Student Affiliate directory to assist in intergroup communication. Nine area colleges were prepresented at the meeting: Emmanuel College, Simmons College, Boston College, Curry College, Northeastern University, Merrimack College, Boston State College, Stonehill College, and Eastern Nazarene College. Other Student Affiliate groups in the area are urged to notify Dr. Light (The Foxboro Company, 543-8750) if they are interested in being listed in and receiving a copy of the directory.

MEMBERSHIP NEWS

Dr. George B. Kistiakowsky, who is Abbott and James Lawrence Professor Emeritus at Harvard, received the Franklin Medal for 1972 last month. He was recognized for a lifetime of pioneering research in organic chemistry, and especially for his precise measurements of important physical properties of unsaturated hydrocarbons and for his development of techniques used in the release of nuclear energy.

Staff Changes at Simmons College

Francis J. Waller joins staff of Simmons College, Boston as assistant professor. Peter G. Bowers promoted to associate professor. James U. Piper is on sabbatical this year at MIT. Luella D. Wadsworth promoted to assistant professor. and Jerry A. Bell, who is chemistry department chairman, to professor.

(Continued from page 6)

PEP Drive

Dr. Henry Hill, speaking as regional director, discussed at some length the activities and current problems of the PEP program. He characterized it as "beautifully conceived but poorly executed". Suggestions for handling the program more effectively were made.

The meeting was adjourned at 7:00 p.m.

Respectfully submitted,

S.R. MAGDALEN
JULLIE WALLACE, S.N.D.
Secretary

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