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JOURNAL OF THE TENNESSEE ACADEMY OF SCIENCE

VOLUME 54, NUMBER 2, APRIL, 1979

PROCEEDINGS OF THE TENNESSEE ACADEMY OF SCIENCE FOR 1978

DIANE R. NELSON, *Secretary*
East Tennessee State University

EXECUTIVE COMMITTEE MEETING
APRIL, 1978

The Executive Committee Meeting of the Tennessee Academy of Science was called to order by the President at 7:15 p.m. C.S.T. in the Walnut Room of the Henry H. Hill Student Center, George Peabody College, Nashville on April 21, 1978. Members present were Robert E. Martin, President; James D. Caponetti, President-Elect; Raymond L. Tanner, Past-President; Diane R. Nelson, Secretary; Robert L. Wilson, Treasurer; Gus Tomlinson, Journal Editor; Richard J. Raridon, Director of the Collegiate Division; Paul Wishart, Director of the Visiting Scientists Program; S. K. Ballal and B. R. Jennings, Members-at-Large; James G. Beasley, Lambuth College, Local Arrangements Chairman.

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As delegate to the Association of Academies of Science and to Section X of AAAS, Richard J. Raridon presented the following report:

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A motion to accept the Director's report was passed.

The representatives from the State Department of Education, John K. Bennett and Roger D. Bynum, were absent. A motion was passed that they be appointed Co-chairmen of the Teacher Awards Committee for selection of the Distinguished Teacher Awards from the nine districts of the state. Approval of the names is a function of the Executive Committee.

The President-Elect and program Chairman for the fall meeting, James D. Caponetti, presented a report on program plans. The theme will be "Environmental Toxins." Suggestions were made for speakers. The General Session with four speakers will be scheduled from 10-12; lunch and exhibits 12-2; papers 2-5; business meeting at 5. The meeting will be held November 17 and 18, 1978, at Lambuth College, Jackson.

The Chairman of the Local Arrangements Committee, James G. Beasley, Lambuth College, presented a progress report on the arrangements for the fall meeting. The Chamber of Commerce has been contacted. Motel space and meeting rooms are sufficient.

There were no reports from the other committees.

The report of the Treasurer, Robert L. Wilson, was published in the April, 1978, issue of the Journal.

The Treasurer presented a handout on the budget for 1978-79 for consideration by the Executive Committee. A motion was passed to adopt the following budget:

1. President's Office	\$ 100.00
2. Secretary's Office	400.00
3. Editor's Office	3300.00
4. Treasurer's Office	1700.00
5. Dues to AAAS	60.00
6. Printing-Mailing Journal	7000.00
7. AAAS Conference	200.00
8. Annual Meetings Expense	800.00
9. Programs of the Academy	
Collegiate Division	\$1500.00
Visiting Scientists	3040.00
Junior Academy	3000.00
Summer Scholarships	500.00
	8040.00
	\$21600.00
Projected Income	
Tennessee Department Education	15000.00
Membership Dues	4000.00
Journal Subscriptions	1300.00
Registration Fees	1000.00
AAAS Grant	220.00
Journal Sales and Gifts	80.00
	\$21600.00

Discussion was held on obtaining additional sources of income in order to expand existing programs. Richard Raridon listed foundations in Tennessee with grants for secondary and/or higher education which should be contacted by T.A.S. A motion was passed to set pre-registration for the annual meeting at \$4; registration at the meeting, \$5; no charge for student registration. A motion was passed to set the Exhibitor's fee at \$50 for the fall meeting.

Discussion was held on a page charge for the Journal. A motion was passed to extend the per page charge of \$10.00 to all contributors of articles after January 1, 1979, with provision for hardship cases. The Editor will consult with the Editorial Staff (or a subcommittee of the staff) to make decisions on hardship cases. Notification of the charge will be presented in the Journal's "Notice to Authors."

OLD BUSINESS

President Martin stated that during Raymond Tanner's presidency, contact was made with the Science Association of Teachers about the possibility of a joint meeting, however, the S.A.T. felt there was nothing to be gained by a joint meeting at this time.

NEW BUSINESS

James Caponetti stated that if there are no further changes in the Constitution, it should be published or otherwise made available to members. It was suggested that the Constitution be mimeographed and distributed at the annual meeting.

The meeting was adjourned at 10:15 p.m. C.S.T.

EXECUTIVE COMMITTEE MEETING

NOVEMBER, 1978

The Executive Committee of the Tennessee Academy of Science, Inc., was called to order by the President at 7:00 P.M. C.S.T. in the Conference Room of the Holiday Inn in Jackson, Tennessee, on November 16, 1978. Members present were Robert E. Martin, President; James D. Caponetti, President-Elect; Raymond L. Tanner, Past-President; Diane R. Nelson, Secretary; Robert L. Wilson, Treasurer; Gus Tomlinson, Journal Editor; Richard J. Raridon, Director of the Collegiate Division; William N. Pafford, Director of the Junior Academy; Wintfred L. Smith, Chairman of the Scientific Field Stations Liaison Committee; Roger Bynum, State Department of Education; S. K. Ballal and B. R. Jennings, Member-at-Large; James G. Beasley, George Edwards, and June White, Local Arrangements Committee.

The President ruled that smoking would not be permitted during the meeting.

The Secretary, Diane R. Nelson, had mailed printed copies of the Minutes of the April, 1978, Executive Committee Meeting. They were approved without change by a motion passed unanimously. As indicated in the minutes, the Liaison officer is not a member of the Executive Committee; therefore the Editor was instructed to change the list of officers in the Journal.

The Treasurer, Robert L. Wilson, submitted an audited report which appears elsewhere in these proceedings along with the report of the Auditor. Both reports were accepted by a passed motion after a correction in the budget allocated for the Editor's office. It was noted that expenditures were about \$2500. greater than income.

The Editor, Gus Tomlinson, submitted the following report: "Four numbers of volume fifty-three have been published since the annual meeting last November. Each issue was published and mailed on schedule during the year. In addition to the regular annual inclusions in the Journal, i.e., proceedings, news items, awards, current events, abstracts, reports, index, etc., the 1978 volume contains thirty-two regular manuscripts and a 4-part Biological Field Stations of Tennessee Report which has now replaced the Reelfoot Lake Biological Station Report of previous years. The breakdown by subject area for 1978 inclusions in the Journal is as follows:

Physics and Astronomy	1
Botany	6
Chemistry	2
Environmental Science	3
General Science	1
Geology-Geography	7
Medical Science	1
Science Education	2
Zoology	9
Biological Field Station Report	1
Abstracts (sets)	2
Proceedings	1
News Events (sets)	4
Index	1

The January 1979 issue is in page proof form. It will be a broad spectrum issue containing ten manuscripts representing the following subject areas:

Geology-Geography (basic research)	1
Geology (Thesis-Library)	1
Science (Historical)	1
Botany	2
Mathematics	1
Chemistry	1
Physics	1
Zoology	2

Eleven manuscripts are currently in galley proof form and are being reviewed and corrected by authors. These manuscripts are scheduled to be published in April, with space limitation in this issue requiring that several be carried over to July. Twelve additional manuscripts have been accepted and are being editorially prepared for the printer.

Fifty-two new manuscripts were received during 1978. This number compares with 41 in both 1977 and 1976 and constitutes the highest number to be received in any one year for at least a decade. Twenty-two of these are still in the review process and constitute a modest backlog somewhat in excess of the last few years (Fourteen in 1977 and 15 in 1976). One manuscript was rejected for publication on the basis that it was not appropriate for the JTAS. A few additional ones of the 22 backlog may be withdrawn by authors or rejected by the Editor unless major revisions can be successfully completed.

Publication costs for the Journal continue to be substantial and have increased slightly during 1978. Such costs have not increased however to the same degree as inflation has risen during the year. Editorial and clerical assistance continues to be done by students who work parttime at the expense of the Academy. Total operating costs of the Editor's Office to the Academy averaged \$271. per month (Total \$3252) in 1978 as compared to \$268. per month for 1977. By continuing to utilize student help, it should be possible to operate another year without a budget increase (Current budget \$3300/yr.).

JTAS SUMMARY FOR 1978

- Thirty-two manuscripts were published since November of 1977 with an additional 10 already in page proof form for the January issue.
- Fifty-two new manuscripts were received during 1978, twenty-two of which are still in review and/or author revision.
- The largest increase in published manuscripts for 1978 by subject area was in geology and environmental science with some decrease in medical science and physics-astronomy.
- The traditional Reelfoot Biological Station Report was enlarged during 1978 to include brief reports from the E.J. Meeman Biological Field Station, the A. D. Oxley Biological Field Station and Tech Aqua Biological Station. A similar report is scheduled to appear annually in the April issue.
- Back issues to 1970 are still available in the Editor's office. Photocopies of reprints of older work is now available through U. S. Dept. of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. Libraries or others who may be interested in obtaining whole JTAS back issue sets or major portions thereof may purchase microfilm reels for all issues dating back to 1926 from AMS Press, Inc., 56 E. 13th Street, New York, N. Y. 10003. Back issues from the Editor's office are \$3 per copy. Reprints and microfilm reels are priced according to length of article or reel. Requests should be directed to the agency which provides the service.

James Beasley, Chairman of Local Arrangements, requested his report be moved up in the agenda. He submitted the following report:

"The Committee met on a number of occasions in planning and preparing for the 88th Annual Meeting, November 17-18, 1978 at Lambuth College.

Dr. June White and Professor Betty Gurley served as a sub-committee with responsibility for registration.

Dr. James Davis assumed responsibility for scheduling and arranging room assignments and planning for exhibitors.

Dr. George Edwards headed a sub-committee with Dr. Harold

**SUMMARY
VISITING SCIENTISTS PROGRAM
STATISTICAL SUMMARY**

	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
CONTACTS MADE							
Number of Visits	60	66	60	42	61	61	80
Number of Students Contacted	9343	10234	8911	3502	8515	5776	7522
Number of Teachers Contacted	268	249	214	148	181	321	296
Number of Classes Contacted	178	217	209	81	151	161	161
Mileage					3535	3625	3971
Number of Scientists on Roster	99	83	96	90	128	104	104
FIELDS REPRESENTED							
Astronomy							Medicine and Pharmacy
Biology							Physics
Chemistry							Psychology
Ecology							
							Engineering
							General Science
							Geology and Geography
							Mathematics

Simmons and Dr. Matish Mahajan and Professor James Grove with responsibility for projection equipment and facilities.

Dr. James Beasley made arrangements for the Banquet, the Executive Committee Meeting, Hospitality and coordinated planning with staff and administration of the College.

Dr. Ronnie Barnes and Mrs. Mary Jo Mulherin assisted the committee by planning publicity and Professor John Pechonick was responsible for coordinating parking and instrument maintenance.

Mr. Charles Moyer of ARA Food Services made arrangements for the food and service aspects of the banquet. Dean Paul Finney coordinated room preparation for the General Session and for the banquet.

Planning and preparations went smoothly and all involved are to be commended and thanked. It would be helpful at future meetings if the local arrangements were provided with 50-100 programs for use in planning and publicity at the local level."

The Director of the Visiting Scientists program, Paul Wishart, was absent but arranged with the Secretary to present the following report. "Preparation for the 1977-78 VSP Roster began in May, 1977. Letters were written to the scientists listed in the previous year's Roster to inquire if they desired to continue to serve in the program. Participants were requested to make appropriate additions or changes in the topics for their presentations. Application forms for new nominees were sent to each of the scientists in an effort to secure additional specialists from different academic fields from the various parts of the state. Approximately twenty new scientists were added to the official team as a result of the inquiry. After the required data for the new Roster had been received, forms were sent out to all of the new prospects to obtain: 1) information as to the topics to be presented in the secondary schools and, 2) relevant professional and personal data required to conduct the program. Follow-up letters were mailed during the summer and also during the fall to those who failed to respond to the first mail-out in order to complete the Roster.

The 1977-78 Roster, including almost 100 individuals, was typed in two sections in order to make it possible for late responses to be included for the current academic year. More than 500 copies were prepared for distribution to teachers, supervisors, and scientists throughout the state. Geographic areas extending from Upper East Tennessee to the Memphis area are involved in the program with both rural and metropolitan secondary schools utilizing the services of our scientists.

We have found that a significant number of the schools were desirous of repeated visits from scientists representing one special academic area as for example: Biology or Geology. Arrangements are made for selected schools to schedule as many as four follow-up visits if these are compatible with the curricular program of the school. Scientists are also encouraged to work with teachers in science inservice programs.

Inflation and high fuel costs continue as critical factors in the operation of the VSP educational effort. The increasing travel costs and closing of schools during cold weather are examples of factors directly related to the number of visits that can be made and to the successful operation of the program. Scientists of the state continue to show their willingness to accept the very modest honoraria provided by the VSP in order to serve Tennessee's high school students and teachers.

Evaluative comments from both the schools and the scientists indicate that the program provides a much needed service and is deserving of continuation in future years. Evaluation reports

are used after each visit and the feed-back from the scientists, science teachers, principals, and students are most beneficial in improving the operation of all portions of the program.

Special fields in science and science related areas that were included in the program for the current year are shown in the following list along with a note* indicating geographic areas needing additional scientists."

- | | |
|----------------------------|------------------------|
| 1. Agriculture E, W* | 7. Geology & Geography |
| 2. Astronomy E, W* | 8. Mathematics |
| 3. Biology & Ecology E, W* | 9. Medicine & Pharmacy |
| 4. Chemistry W* | M, W* |
| 5. Engineering E* | 10. Physics M* |
| 6. General Science M* | 11. Psychology |

*E—East Tennessee *M—Middle Tennessee *W—West Tennessee

The Director's report was approved by a passed motion. It was suggested that the V.S.P. program be advertised in the S.A.T. newsletter, the "Tennessee Teacher" (T.E.A. Journal), and JTAS to reach more teachers. Earlier issuance of the Roster might also be beneficial.

The chairman of the Scientific Field Station Liaison Committee, Wintfred L. Smith, submitted the following report: "At our meeting on November 17, 1977, a \$500 award was made to the A. D. Oxley Biological Field Station, operated by Lambuth College, for use in an introductory course to be offered at the station during the summer of 1978. This course was organized and advertised but did not attract students so it was not offered. The money has not been spent, Dr. Robert A. Carlton, Director of the station, has indicated that a number of items of field equipment are needed and has requested permission to use the money for the purchase of boats, seines, etc. He has agreed that this request should be acted upon by the Executive Committee.

Two proposals for support during the summer of 1979 have been received.

(1) Financial support for students attending summer field course at station, Memphis State University. We will be offering Biology 4050, Field Techniques in Ecology, at the Edward J. Meeman Biological Field Station during the summer of 1979. This is a four-hour undergraduate credit course dealing with the development of management programs and plans for forests, fields, streams, and ponds, with the major emphasis on the interactions of these community types.

The class will be restricted to 12 students and I would like to ask the Tennessee Academy of Science for \$120.00 of which the total amount will be divided equally among the class members to be used for travel expenses during the course.

Name of station: E. J. Meeman Biological Field Station
Institution: Memphis State University
Administrative Officer: Dr. Neil A. Miller, Biology Department
Amount Requested: \$120.00
Distribution: \$10.00/student for travel expenses (field trips about and away from station)

(2) Application for scholarship support. We wish to ask that the Tennessee Academy of Science consider granting \$500 to the Tech Aqua Scholarship Committee to award to a worthy student from any school in Tennessee to attend the summer '79 session at the Tech Aqua Biological Station.

The funds made available by the Academy will be distributed at the discretion of the Tech Aqua Scholarship Committee to support one or more applicants based on demonstrated academic excellence. Robert E. Martin, Tech Aqua Director, Box 5041, Tennessee Tech, Cookeville, TN 38501."

A motion was passed to approve the chairman's report. Motions to approve the requests of Lambuth College, Memphis State, and Tennessee Tech were defeated after discussion of the financial status of the Academy. The Treasurer will invoice Lambuth College for the \$500 which was previously awarded but not spent. At the suggestion of Dr. Tanner, Dr. Martin appointed a committee to develop guidelines for all scientific proposals to the Academy. The committee, consisting of Wintfred Smith, Roger Bynum, and B. R. Jennings, will report at the April meeting of the Executive Committee.

The Director of the Junior Academy, William N. Pafford, submitted the following report: "High school students submitted a total of 36 research papers to the Junior Academy of Science during 1977-78. A panel of readers selected the top 14 papers for presentation at the spring meeting, which was held on April 14 at Peabody College.

The 1978 Junior Academy *Handbook and Transactions* is in press. A panel of judges evaluated the presentations, and the five papers receiving the highest rating are being published in their entirety (after editing). Abstracts of the other nine papers will be published.

Copies of the *Handbook* will be mailed to every high school in Tennessee, to members of the Executive Committee of TAS, and to all students who presented papers at the spring meeting. A copy of the 1978-79 Junior Academy *Newsletter* will also be included. This year we have arranged to have the *Handbook* published by the East Tennessee State University Press; despite inflation, the cost will be less than we paid last year.

Peabody College has been kind enough to invite the Junior Academy back for the 1979 spring meeting, which is scheduled for Friday, April 20. We are sincerely grateful for their kind hospitality.

Judges at the 1978 spring meeting were Dean Arthur Cook, Peabody College; Dr. Clifford Hofwolt, Peabody College; and Ms. Jean Nicholson, Metro Public Schools. Dr. Gus Tomlinson handled local arrangements, and the Junior Academy is most grateful for his assistance and cooperation."

The Director's report was approved by a passed motion.

The Director of the Collegiate Division, Richard J. Raridon, submitted the following report: "Regional meetings of the Collegiate Division were held during the spring of 1978 at Christian Brothers College, Carson-Newman College, and Tennessee Technological University. All of the meetings were well attended and a total of thirty-nine papers were presented. The abstracts were published in the October 1978 issue of the *Journal*. Thanks are due to the regional sponsors: East, Dr. Robert G. Ziegler, Lincoln Memorial University; Middle, Dr. John T. Netterville, David Lipscomb College; West, Drs. George W. Edwards and James G. Beasley, Lambuth College."

The Director's report was approved by a passed motion. President Martin then presented committee reports from the respective chairpersons as follows:

1. Auditing Committee—The Chairman, Myron S. McCay, sent the following report: "Members of the Auditing Committee have inspected the records of the Treasurer for 1978 and have found them accurate, complete and clearly presented.

Again it is in order to commend the Treasurer for the clarity of the records, and for the thorough audit by a local certified public accountant."

The Committee report was approved by a passed motion.

2. Fellows Committee—The Chairman, S. K. Airee, sent the following nominations for Fellows: Michael J. Harvey (MSU), Phillip R. Kemmerly (APSU), Charles H. Nelson (UTC), G. K. Sharma (UTM), Robert E. Hershey (State Geologist), and O. Ray Jordon (TTU).

A motion was passed to approve the six nominees as Fellows of the Academy and to present them to the membership at the annual Business Meeting.

3. Membership Committee—The Chairman, Clay Chandler, sent the following report: "On 30 March 1978 each chairman of the three spring meetings of the Collegiate Division was requested to display a recruiting station at the registration desk and was sent membership applications.

In early September 1978 the following plan was implemented to increase membership. A current list of active members was obtained from Dr. Robert E. Martin and campus membership drive leaders from collegiate institutions of Tennessee were selected from the list. Each member of the Membership Committee was asked to contact each membership drive leader in his area and request participation. Dr. Diane Nelson was asked to send ten membership applications to each membership drive leader. Thus, 33 membership drive leaders were established so that, theoretically, 330 membership applications were available to prospective members across the state.

I wish to thank each member of the Membership Committee, Dr. Diane Nelson, Dr. Robert E. Martin, and each campus drive leader for their contribution to this effort."

The Committee report was approved by a passed motion.

4. Necrology Committee—The Chairman, Edward W. Burke, sent the following report: "The committee sadly reports the loss of three members of the Academy.

I. Dr. Kenneth LaDoyt Hertel passed away November 5, 1976, in Knoxville, Tennessee.

Dr. Hertel was born in Van Wert, Ohio, on July 26, 1898.

He earned the B.S. degree in Engineering from Ohio State University in 1920 and the Ph.D. in Physics from the University of Chicago in 1926.

He taught and did research in the Physics Department of the University of Tennessee at Knoxville from 1926 until his retirement in 1968, serving as chairman of the department from 1931 to 1956. He was an internationally recognized authority for his research on the physical properties of cotton fibers. Dr. Hertel was a member of a number of honorary science and mathematics societies.

II. Dr. Lexemuel Ray Hesler passed away in 1977.

Dr. Hesler was born February 20, 1888, in Fountain County, Indiana. He received the A.B. degree from Wabash College in 1911 in Biology. His Ph.D. was awarded in July, 1914, by Cornell University.

He taught at Cornell until 1919, at which time he resigned to accept a position as professor and head of the Department of Botany at the University of Tennessee at Knoxville. He was Dean of the Liberal Arts College at U.T. from 1934 until his retirement.

Dr. Hesler was a respected authority in his field, publishing widely and holding memberships in many scientific and honorary societies."

III. Cord H. Link, Jr., passed away in March, 1978.

Mr. Link was born in Chattanooga, Tennessee, in 1924. He earned his B.S. degree in physics from the University of Chattanooga (1950), after having served in the Navy during World War II. He did graduate work in physics in the area of optics at Johns Hopkins University.

ARO in 1959 to teach for two years at the University of Chattanooga. He then served as a computer analyst at the Arnold Center in the Central Data Processing Center for more than twenty years. He was an expert in computer motion graphics.

Cord Link was interested in ecological problems and was a life member and former director of the National Speleological Society.

Edward W. Burke, Jr., Chairman
Robert Lewis Amy
Franklin C. Mason

The committee report was approved by a passed motion.

5. Nominating Committee—The Chairman, Raymond L. Tanner, submitted the following nominees for officers of the Academy:

"President-Elect: Dr. Clay M. Chandler, Middle Tennessee State University; Secretary: Dr. Diane R. Nelson, East Tennessee State University;

see State University; Treasurer: Dr. Robert L. Wilson, University of Tennessee, Chattanooga."

A motion was passed to approve the three nominees for officers and present them to the membership at the annual Business Meeting.

6. Research Committee—The Chairman, Charles A. Brown, sent the following report: "The Research Committee sent out several application forms for research grants, but none of these were returned. Thus the committee has not awarded any research grants to date this year.

The Research Committee would appreciate any suggestions that anyone might wish to make concerning a research proposal to be submitted to AAAS."

The committee report was approved by a passed motion. A motion was passed to publicize the availability of research funds in the JTAS, VSP roster, and "Tennessee Teacher."

7. Resolutions Committee—Report to be submitted at Business Meeting.

Roger Bynum, State Department of Education, reported that he and John Bennett will be responsible for nominations for the Distinguished Teacher Award from the nine developmental districts in Tennessee. The SAT newsletter and JTAS carry announcements about the nominations.

OLD BUSINESS

1. No positive response was obtained from writing foundations on the list provided by Richard Raridon.

2. Janice Ann Miller, supported by T.A.S. for the London International Youth Science Fortnight, will report to the Collegiate Division on Saturday.

3. The annual meeting will be held at Meharry Medical College in 1979 and at ORNL in 1980. A site for 1981 is needed in the Middle Tennessee area.

4. Copies of the constitution are now available.

NEW BUSINESS

1. Robert Martin was informed by a member that the current meeting is the 69th meeting of the Academy in its 88th year. Next year's meeting will be the 89th year of the Academy.

2. A motion was passed to reappoint Dr. Raridon as the Academy's representative to Section X of AAAS, and he was authorized to attend the AAS and AAAS meetings.

The meeting was adjourned at 10:15 P.M. C.S.T.

THE EIGHTY-EIGHTH YEAR OF THE TENNESSEE ACADEMY OF SCIENCE

NOVEMBER 16-17, 1978

LAMBUTH COLLEGE, JACKSON

The annual meeting of the Tennessee Academy of Science, Inc., in its eighty-eighth year, was held November 16-17, 1978, at Lambuth College, Jackson, Tennessee. Dr. James G. Beasley, Professor of Chemistry at Lambuth, was chairman of the Local Arrangements Committee, and Dr. James D. Caponetti, Professor of Botany at the University of Tennessee, Knoxville, was Program Chairman.

Meeting registrations totaled 208. Of these, 76 were university-college professors, 3 from State Divisions, 1 from the Oak Ridge National Laboratory, 2 from private industry, 99 college students, and 27 others.

A total of eight laboratory supply and optical companies and affiliates exhibited their products in the first floor lobby of the Hyde Science Hall in alphabetical order, they were: ACTS Instruments, Inc.; Carolina Biological Supply Co.; Frany Caryl Company; R. L. Dotts Instruments Co.; Preiser Scientific, Inc.; Sargent-Welch Scientific Co.; Southern Biological Supply Co.; and Ward's Natural Science Establishment, Inc.

The General Session was held in the Colonial Room of the College Union on Friday morning, November 17, beginning at

10:00 a.m. C.S.T. The Chairman of the Local Arrangements, Dr. James G. Beasley, chaired the session, and the welcome was given by Dr. James S. Wilder, Jr., President of Lambuth College, Jackson, Tennessee. The theme of the session was "Environmental Toxins." Section meetings were held Friday afternoon; 95 papers were presented as listed in the program. The Annual Business Meeting was held in Room H215 of Hyde Science Hall at 5:00 p.m. C.S.T.

The Annual Banquet was held in the Colonial Room of the College Union. It was served buffet style beginning at 7:00 p.m. C.S.T. Friday evening. Banquet ticket sales were 75. President Robert E. Martin presided, and the address was delivered by Dr. Walter G. Rosen, plant physiologist, Office of Toxic Substances, Environmental Protection Agency, Washington, D. C. The address was "Environmental Toxicology and the Toxic Substances Control Act."

The Collegiate Division held its meeting on Saturday morning at 9:00 a.m. C.S.T. in Room H215 of Hyde Science Hall. Dr. Richard J. Raridon, Director of the Collegiate Division, presided and 8 papers were presented by college students.