

THE SIGMA ZETAN



VOLUME XXIII

SAN ANTONIO, TEXAS, DECEMBER 1951

NUMBER 1

OUR LADY OF THE LAKE COLLEGE

THE SIGMA ZETAN

Official Organ of SIGMA ZETA

NATIONAL OFFICERS

National President.....	GERRIT M. WISSINK, <i>Mu Chapter</i>
National Vice President	KEITH D. CRANE, <i>Epsilon Chapter</i>
National Recorder-Treasurer	GILBERT W. FAUST, <i>Zeta Chapter</i>
National Historian	WALTER H. ELLER, <i>Kappa Chapter</i>
National Editor.....	SISTER MARY CLARENCE, <i>Sigma Chapter</i>
National Past President	MYRL H. AHRENDT, <i>Upsilon Chapter</i>

DEDICATION

We are happy to extend a cordial welcome to Chi Chapter from Missouri Valley College, Marshall, Missouri, into the Sigma Zeta Honorary Science Society and to dedicate to them this issue of the THE SIGMA ZETAN.

A MESSAGE FROM THE NATIONAL PRESIDENT

Sigma Zeta is now entering its second quarter of a century of existence as a National Honor Society. Its membership has shown a steady growth throughout the years, and its influence has gained prestige on every college campus where chapters have been active. Much of this progress may be attributed to work of the pioneers in the Sigma Zeta organization.



G. W. Wissink

When one stops to consider and evaluate the various factors which have made the society what it is to-day one can not help but recognize that the spirit of service has played a very prominent part. The members of Sigma Zeta have always been ready and willing to help each other and they have always cooperated well with others. The active members have helped the associate members, and the associate members have helped the non-members become more interested in the various fields of Science. Also, both active and associate members have participated in all school activities. This is as it should be, because the people trained in the fields of science and mathematics will be looked upon for leadership much more in the future than they have been in the past. There has been a steady rise in the demands of the public for leadership and service from those who have had scientific training.

Let us this year strive in our various chapters to gain the background necessary for future service and so uphold the tradition of the pioneers in the Sigma Zeta Honor Society.

SIGMA ZETAN RECEIVES ROTARY INTERNATIONAL FELLOWSHIP

Chicago, Ill., Sept. (Special)—Evan T. Thomas of Pittston, Pennsylvania, a member of Sigma Zeta, is among the 90 outstanding graduate students from 33 countries to be awarded a Rotary Foundation Fellowship for advanced study abroad in 1951-52 by Rotary International, world-wide service organization. He will study science education at the University of Bristol, England, in preparation for a career as a college instructor of science.



Evan T. Thomas

Fellowships have been awarded to 284 young men and women in 42 countries of Europe, Asia, Africa and North, South and Central America, as a means of promoting international understanding, good will and peace among the peoples of the earth. Grants for the one-year Fellowships range from \$1,800 to \$3,400, and to date total nearly \$750,000.

May 23, 1951

Dr. Harold E. Affsprung
Missouri Valley College
Marshall, Missouri

Dear Dr. Affsprung:

I have a letter from Dr. Faust, National Recorder-Treasurer of Sigma Zeta, suggesting that you be appointed as official representative of Sigma Zeta for the installation of the Chi chapter. I think his idea is a good one and if you care to have the gavel for the occasion will you kindly contact me and I shall send it on to you. Since there has been some delay in my reply to Dr. Faust's letter you may have already had

Mr. Thomas received the Bachelor of Science Education degree in 1950 from the Mansfield (Pennsylvania) State Teachers College, and the M.S. degree in June from Syracuse University. At Mansfield State Teachers College, he became affiliated with Sigma Zeta, was business manager of the college newspaper, a member of the Dramatic Club, the Men's Glee Club, the Honorary Art Club, and was football trainer and water safety instructor.

The son of Mr. and Mrs. Evan T. Thomas of Pittston, Pennsylvania, he was born in Wilkes-Barre, Pennsylvania, in 1927 and is single. The Rotary Club of Pittston sponsored him as a Rotary Fellow.

Since the Rotary Foundation Fellowship program was inaugurated in 1947,

your installation ceremony and the mailing of the gavel may be too late.

I am certain that you will have a very active Chapter at your school this coming year. We have found that the work of Sigma Zeta tends to stimulate good scholarship among all of the students. Since you are an old member of the society I am certain that you will have a distinct advantage in handling the sponsorship over many of us who had to learn the hard way.

The Mu chapter at Mankato wishes you every advantage possible during the coming school year. Naturally, I also wish you all the luck in the world.

Sincerely yours,
G. M. Wissink
Nat.-Pres. Sigma Zeta

REPORT TO THE NATIONAL-RECORDER OF THE INSTALLATION OF THE CHAPTER OF SIGMA ZETA

The installation meeting of the Chi Chapter took place at seventy-three in the evening, June 1, 1951. The Chairman, Mr. Harold E. Affsprung, appointed Dr. R. T. Dufford to act as Conductor and Mr. Fritz D. Schupp to act as Recorder.

The meeting took place in the conference room in Baity Hall at Missouri Valley College. A retort and books were arranged on the desk of the Chairman in the same order as on the official key of the society. Two large letters, Sigma and Zeta, were also displayed on either side of the desk.

The meeting was called to order by the Chairman. The Conductor presented the faculty sponsors including himself. The faculty sponsors are: R. T. Dufford, L. C. Thomas, W. I. Ferguson, Bruce Stewart and H. E. Affsprung. They were welcomed into the society and charged to uphold the obligations laid upon them by the society by the Chairman.

The Conductor then presented the following students to be initiated as charter members of the Chi Chapter:

Martha Ann Lamar
Ellen Christine Lockridge
Fritz Duane Schupp
Gerald Raymond Kilp
Kenneth E. Waddell
Herbert E. Iles
Rosalie Kilp
David Dautenhahn
Richard Frederick Schweigerdt
Delmar A. Fidler
George C. Leuthge, Jr.

The student initiates were then formally welcomed into the society. Because Mr. Fritz D. Schupp who was acting as Recorder was a new

student member, the speech of the Recorder in the ritual for initiation of student members was given by the Chairman.

After the initiation of student members, elections were held and Mr. Fritz D. Schupp was elected President, Mr. Richard F. Schweigerdt Vice-President and Mr. Herbert E. Iles Recorder-Treasurer.

The new officers were seated by the Chairman and the charter presented to them. Some local business was transacted as a new meeting could not be held until next fall. Following this, the first meeting of the Chi Chapter was adjourned.

Respectfully submitted,
Harold E. Affsprung

MINUTES OF THE TWENTY-SECOND ANNUAL CONCLAVE OF SIGMA ZETA

The twenty-second annual Conclave of Sigma Zeta was called to order at 9:10 A.M. on Friday, April 20, 1951. The meeting was held at Anderson College in Anderson, Indiana, with the UPSILON Chapter as host. Myrl H. Ahrendt presided. Mr. Ahrendt presented Glenn Sands, president of Upsilon, who presented Dean Russell Olt of Anderson College. Dean Olt, in his welcoming address, reviewed the history of Anderson College and traced the development of its work in the sciences. Dr. G. M. Wissink, National Vice President of Sigma Zeta, responded to Dean Olt's Welcome.

The first period devoted to the presentation of student papers followed those opening remarks.

Roll call of the chapters showed that nine chapters were represented at the Conclave.

The first order of business was the presentation of the gavel by F. A. Hanawalt of Epsilon Chapter, who was originally responsible for the manufacture of the gavel. He explained the significance of the various pieces of wood which have been used in its construction.

The minutes of the previous conclave were read and approved. Then followed the reports of the National Officers, which were all accepted by the conclave, and copies of which are appended to these minutes.

The report of the special committee on the merger with Chi Beta Phi indicated that nothing had been done on the merger because Chi Beta Phi had decided not to proceed with a merger plan. Consequently, there is no need to continue the committee.

Mr. McClure reported for the committee on the publication of the history, and recommended that the history be published as planned. The report and its recommendation were accepted.

The report of the special committee on Jewelry revealed that several companies had been invited to propose contracts and designs for new insignia; that the National Council had discussed the matter thoroughly and recommended to the conclave that there be no change made in jewelers

and that no additional items be added to the line. The report of the committee and the recommendation of the National Council were accepted by the Conclave.

A report on other actions of the National Council presented the plan for the distribution of the \$25.00 which had been appropriated by the 1950 Conclave to four distant chapters to help them defray traveling expenses. It was decided that this money should be paid on a man-mile basis to the following chapters: Epsilon, Kappa, Phi, and Zeta (student carload, only).

It was announced that a petition for a chapter had been received from Missouri Valley College at Marshall, Missouri. The National Council had approved the petition, and it was presented to the Conclave to be acted on at the Saturday session.

The following temporary committees were appointed to act during the Conclave: *AUDITING*—Charles Brumfiel, Xi; Barbara Ahlberg, Kappa; Rosemary Arndt, Rho; *NOMINATING*—D. E. Miller, Xi; C. W. Bennett, Kappa; Zylpha Hurlbut, Upsilon; Jeanette Holm, Zeta; Olin Hoffman, Phi; *RESOLUTIONS*—S. M. McClure, Phi; David L. Dover, Epsilon; Shirley Bagley, Mu; Paul K. Henney, Xi; *FOUNDERS' CUP*—M. H. Ahrendt, Upsilon; G. W. Faust, Zeta; R. L. Shelley, Xi; *PANEL DISCUSSION*—Alvin Long, Zeta; John Skaggs, Phi; Jack Moore, Xi; Don Bangert, Kappa; Robert Winner, Epsilon.

Assignments for reporting various phases of the Conclave for the SIGMA ZETAN were announced as follows: Field Trips, Zeta; Banquet, Rho; Student Papers, Xi; Pictures, Upsilon.

The Business meeting was adjourned until Saturday morning. Friday afternoon was devoted to field trips to the Celco-Remy Division of General Motors, and to the Gospel Trumpet Publishing Company. The science laboratories of Anderson College held open house on Friday afternoon. The evening banquet was held at the YMCA, and was featured by an address on "Some Peacetime Applications of Atomic Energy," presented by Dr. J. C. Boyce of the Argonne National Laboratory.

The Conclave resumed on Saturday morning with a presentation of additional student papers and a panel discussion on chapter problems, followed by the final business session.

The petition of Missouri Valley College was approved by all of the chapters represented at the Conclave: Beta, Epsilon, Zeta, Kappa, Mu, Xi, Rho, Upsilon, and Phi. (Since there are 17 active chapters and a two-thirds vote is necessary, the remaining chapters were polled by mail. Approvals were subsequently received from Sigma on May 4, Alpha on May 5, Tau on May 8, and Gamma on May 12. The charter was therefore granted on May 8, 1951.)

MU Chapter presented an invitation to hold the 1952 Conclave at Mankato, Minnesota. The invitation was accepted.

Mr. Ahrendt discussed possible methods of expanding Sigma Zeta.

He indicated that the most effective agent was the personal enthusiasm of members in imbuing others with the ideals of Sigma Zeta. Mr. McClure raised the question of strengthening some of the weaker chapters, and invited suggestions on how to do it.

Mr. Miller moved that \$25.00 be made available in 1952 to chapters who have not appeared at the National Conclave for the past two years, provided they attend the 1952 Conclave. Mr. Bennett seconded the motion and it carried.

The AUDITING, RESOLUTIONS, AND FOUNDERS' CUP Committees presented their reports which were accepted by the conclave. Copies of these reports are appended to these minutes.

The NOMINATING Committee presented the following slate of officers for 1951-52:

National President.....	Gerrit M. Wissink, Mu Chapter
National Vice President.....	Keith D. Crane, Epsilon Chapter
National Recorder-Treasurer.....	Gilbert W. Faust, Zeta Chapter
National Historian.....	Walter H. Eller, Kappa Chapter
National Editor.....	Sister Mary Clarence, Sigma Chapter
National Past President.....	Myrl H. Ahrendt, Upsilon Chapter

Mr. McClure moved that the report of the Nominating Committee be accepted and that the officers be declared elected. The motion was seconded and carried.

Mr. Ahrendt presented the gavel to Mr. Wissink, who adjourned the twenty-second annual Conclave of Sigma Zeta at 11:58 A.M. on Saturday, April 21, 1951, closing the business of the 26th year of Sigma Zeta.

PROCEEDINGS OF THE NATIONAL COUNCIL OF SIGMA ZETA

April 19, 1951

The National Council of Sigma Zeta met on Thursday evening, April 19, 1951, in Morrison Hall, Anderson College, Anderson, Indiana. Faculty members of the chapters present were invited to participate in the discussions of the Council.

The chief matter for discussion was the report of the special committee on jewelry. Mr. Faust presented the data which had been received from several manufacturers, along with proposed designs for new insignia and a coat of arms. After a thorough discussion of the entire matter, Mr. Bennett moved that we continue our contract with the College Shop of St. Louis. Miss Zylpha Hurlbut seconded the motion and it carried.

The temporary committees which were to act during the conclave were appointed. They are listed in the Conclave minutes, along with the assignments which were made to the various chapters to report activities of the Conclave to the SIGMA ZETAN.

The Council designated Epsilon, Kappa, Phi, and Zeta chapters as the

recipients of the \$25.00 appropriated to help defray the traveling expenses of four distant chapters. It was agreed that only the student carload from Zeta chapter should be counted, and that the money would be distributed on a man-mile basis.

The \$25.00 appropriation for travel expenses was distributed as follows:

Epsilon	5 students — 185 miles	925/4440	\$ 5.20
Zeta	4 students — 485 miles	1940/4440	10.90
Kappa	3 students — 295 miles	885/4440	5.00
Phi	3 students — 230 miles	690/4440	3.90
		<hr/>	<hr/>
		4440/4440	25.00

REPORT OF THE NATIONAL PRESIDENT

April 20, 1951

The president's office during the past year has been concerned chiefly with the growth of Sigma Zeta. To this end the president has attempted two things: to help revitalize inactive chapters; and to stimulate thinking about the possibility of an expansion program.

Sigma Zeta now has 18 chapters, two of which are inactive. A third chapter, Rho, was inactive. Roping to stimulate the Rho Chapter into activity, your president made a trip last fall to Indiana Central College, only to find, to his pleasant surprise, that the chapter had re-activated itself some months before. Through his membership in other organizations, your president has been able to make personal contacts with two of the members of the science faculties of Wilson Teachers College. It is hoped that through these contacts, Omicron Chapter, which has been inactive since 1942, may be revived. Delta Chapter has also become inactive for the present. (Recorder's note: Delta Chapter submitted its annual report immediately after the conclave.)

A considerable amount of correspondence was done in an attempt to find some new ideas or methods that might be used in as an expansion program. It is hoped that the correspondence has stimulated some discussion, and that some ideas may be presented or developed at this conclave. Your president is beginning to feel that expansion takes place in the most wholesome way when it is a natural outgrowth of the enthusiasm of the individual members and chapters. Thus it seems that a prerequisite to an effective expansion program may be a strengthening of our own faith in the value of our organization.

Your president has received inquiries about new chapters from the Duluth branch of the University of Minnesota, Western Michigan College, and Butler University. These schools were invited to correspond with the National Recorder-Treasurer for more detailed information. Missouri Valley College, Marshall, Missouri, has applied for a charter.

Respectfully submitted,

/s/

M. H. Ahrendt
National President

**SIGMA ZETA HONORARY SCIENCE SOCIETY
FINANCIAL REPORT**

April 9, 1951

RECEIPTS

Balance on hand, April 15, 1950 \$ 536.14

Fees from chapters:

Alpha	6	Initiation fees	\$ 14.00	(2.00 overpaid and refunded)
Beta	8		16.00	
Gamma	22		44.00	
Zeta	12		24.00	
Kappa	35		70.00	
Lambda	16		32.00	
Mu	28		56.00	
Nu	25		50.00	
Xi	27		54.00	
Pi	9		18.00	
Rho	7		14.00	
Sigma	6		12.00	
Upsilon	5		10.00	
Phi	5		10.00	
Chi (tent)		part charter fee	10.00	

434.00

Jewelry sales:

Alpha	89.60
Beta	61.00
Gamma	167.90
Zeta	63.00
Lambda	35.25
Xi	80.21
Rho	50.20
Sigma	67.25
Upsilon	22.00
Phi	58.40

694.81

Stationery, cuts, and decals:

Beta	3.75
Nu	1.00
Upsilon	8.50
Phi	.50

13.75

TOTAL RECEIPTS \$1,678.70

TOTAL EXPENDITURES

(See page 2) \$1,310.27

BALANCE ON HAND,
April 9, 1951 368.43

\$1,678.70

(There is on hand in the Recorder-Treasurer's office an inventory of salable items amounting to approximately \$55.00.)

EXPENDITURESJewelry (College Shop) \$ 600.00
(There is an unpaid balance of about
\$25.00 in our account.)

1950 Conclave expenses:

G. W. Faust	\$ 36.55
C. W. Bennett	6.35
M. H. Ahrendt	10.60
R. L. Shelley	11.50
Kappa Chapter	6.20
Phi	5.54
Upsilon	5.51
Nu	7.75
Zeta	25.00
Sigma	25.00
Mu	25.00
Alpha	35.00

200.00

Printing:

Sigma Zetans	307.15
Stationery	40.00

347.15

Office Expense:

National Recorder-Treasurer's salary 1949-50; 1950-51	100.00
Postage	6.00
National President postage and phone	5.00

111.00

Miscellaneous:

Etchings of key	9.12
Purchase of decals from Alpha	40.00
Corporate report	1.00
Refund to Alpha	2.00

52.12

TOTAL EXPENDITURES \$1,310.27

BALANCE ON HAND, April 9, 1951 368.43

\$1,678.70

LAST YEAR:

Balance on hand, April 23, 1949	\$ 437.75
Fees from chapters	464.00
Jewelry sales	881.35
Stationery and cuts	8.90
TOTAL RECEIPTS	\$1,792.00

Jewelry	\$ 850.00	
1949 Conclave expenses	100.01	
Printing	270.85	
Office Expense	21.10	
Miscellaneous	13.90	
TOTAL EXPENDITURES		\$1,255.86

Books audited April 20, 1951, and found in order.

Charles Brumfiel, Barbara Ahlberg, Rosemary Arndt.
Auditing Committee

REPORT OF THE NATIONAL HISTORIAN

April 20, 1951

The Sigma Zeta fraternity began the second quarter century of activity at the close of the Silver Anniversary Conclave in 1950. During the present year the uncertain national conditions have affected adversely almost every smaller college in the country and, at least to some degree, every chapter in Sigma Zeta. However, the work of the organization continued to progress and the growth of the society is indicated by the expected receipt of one or more petitions for chapter charters at this conclave.

Perhaps the most important event of the current year was the decision to reject the proposed merger with another and similar honorary science fraternity (Chi Beta Phi). This decision, in spite of the advantages claimed for the merger, may be regarded as both wise and fortunate; it permits the development of Sigma Zeta along the traditional and unique lines for the stimulation and recognition of sound scholarship in the sciences at the senior college level.

The often-heard desire for expansion has been unusually insistent this year and, perhaps a carefully guarded policy of expansion among the colleges of the type that the organization was designed to serve, may well be established early in the beginning of this second quarter-century of Sigma Zeta history. At the same time, this historian's office notes the wishes of many correspondents that efforts be made to strengthen the weaker chapters, of which the society has several. Just how this is to be accomplished is not clear but might well be considered by this conclave.

It is perhaps the duty of the historian to record the expressed opinion of certain members who foresee difficult years ahead not only for Sigma Zeta but also for similar organizations in the college field. With the expectation of decreased enrollments next autumn in the smaller college, perhaps particularly in the science fields, many of our chapter rolls may be drastically curtailed with the likelihood of the smaller and weaker chapters becoming inactive or merely maintaining a skeleton organization; a continuance of this situation for several years will cripple the work of the organization and could easily lead to the suspension of the national conclave and necessitate conducting the affairs of the society by mail. These facts, some members feel, should be taken into account and due consideration given to them at this conclave. Plans for such a possible

emergency might include the selection of an unusually strong and stable Council or the creation of special committee whose particular duty is to see the organization through the possible crisis and to preserve not only the framework of the organization and the archives of the records but to maintain as well the purposes and traditions of Sigma Zeta so that the society, as in the depression years or after World War II, can immediately resume work when the possible emergency is over.

Respectfully submitted,

S. M. McClure
National Historian

REPORT OF THE NATIONAL EDITOR

The following excerpt is from a letter from the National Editor to the National President:

..... The cost of the two issues of the SIGMA ZETAN is reported by the Recorder-Treasurer. We had 500 copies of each printed this year.

Last November I received a letter from Banta's Greek Exchange asking for a loan of the cut showing the Sigma Zeta National Officers in the September issue. I always send them a copy, hoping that sometime or other they might give us a little publicity. So far the picture has not appeared in their publication, but I think they are running far behind in their publication dates. They promised to return the cut when they got through with it. It has not yet been returned.

I have already received news items from one of the chapters for the next issue of the SIGMA ZETAN. Would you inform them at this meeting that the publication dates have been changed to September and February. Also that news items be mailed to me before dismissal for their vacation. We would like to be able to go to press the latter part of August so that the copies will be ready to be mailed in September.

Pictures always add to the make-up of the publication. May I ask you to appoint someone at the conclave to try and get us a few good pictures that we can use for the September issue. Sigma Chapter will bear the expense for getting the cuts made.

/s/ Sister Mary Clarence
National Editor

The following resolutions were adopted at the National Conclave of Sigma Zeta, held at Anderson College in Anderson, Indiana, on April 19, 20, and 21, 1951:

The delegates to the 1951 Conclave of Sigma Zeta desire to express their appreciation

to President Morrison and Dean Olt for the hospitality of Anderson College and for their words of welcome; and

to the officers and members of UPSILON Chapter for their efforts and aid in making the Conclave one of the most successful meetings in

the organization's history; and
 to the Delco-Remy Division of General Motors, and to the Gospel Trumpet Company for the opportunity to visit their plants; and
 to Lowell Williamson, Miss Alma Bickle, Miss Jacqueline Montieth, and Miss Ingyr Marie Lein for providing entertainment at the banquet; and
 to Dr. J. C. Boyce for a clear and extremely interesting address on atomic energy applications.

PRESENTATION OF THE FOUNDERS' CUP

April 21, 1951

Traditionally, the president of the chapter which holds the Founders' cup presents the cup to its recipient for the next year. This year, since ALPHA Chapter is not present, it falls to my lot as President of Xi Chapter, proud possessor of the cup the previous year, to present it this morning.

The Founders' Cup is awarded to UPSILON Chapter of Anderson College for the following reasons:

1. Since its installation in 1948, this chapter has been very active—showing steady development in its responsibilities to its school and in its responsibilities as a part of our national organization.

2. This year it entertained visiting chapters from nearby schools.

3. It co-sponsored a Science Open House attended by 240 students from Madison County high schools.

4. It has attended every National Conclave since its installation as UPSILON Chapter.

5. It has supported the National Conclave consistently with student papers, having presented three at last year's conclave and two at this meeting.

6. It entertained the National Conclave in this, the third year of its existence.

7. It has had consistently fine relations with the National Recorder-Treasurer.

For these reasons we award this cup to our hosts, the UPSILON Chapter of Anderson College, Anderson, Indiana.

Presented by Jack Moore,
 President, XI Chapter

REGISTRATION FOR THE ANNUAL CONCLAVE OF SIGMA ZETA, APRIL 19, 20, and 21, 1951

BETA (1)

1. S. M. McClure

EPSILON (6)

2. F. A. Hanawalt

3. Don Steele

4. David Dover

5. Marion Smith

6. Robert Winner

7. John Bush

ZETA (9)

8. Gretchen Holstein

9. Barbara Balman

10. Jeanette Holm

11. Barbara Lewis

12. Beatrice Peplinski

13. Gilbert W. Faust

14. Norvin Holm

15. Edward Furstenberg

16. Alvin Long

KAPPA (4)

17. Barbara Ahlberg

18. Bernice Lake

19. Don Bangert

20. C. W. Bennett

MU (5)

21. Shirley Bagley

22. Dan Eustice

23. Winston Grundemuir

24. Marlaw Stangler

25. G. M. Wissink

XI (12)

26. Floy Hurlbut

27. Robert L. Shelley

28. P. D. Edwards

29. Don E. Miller

30. G. F. Brumfiel

31. Paul Henney

32. Donald Johnson

33. J. O. Cross

34. Jean Kirk

35. Deanne Burson

36. Gloriann Quisenberry

37. Jack Moore

RHO (8)

38. Weldon Kincaid

39. Roy Turley

40. Donald Eulthoup

41. Rosemary Arndt

42. Judith Morgan

43. Don Stevenson

44. David P. Elliott

45. Robert Kent

UPSILON (15)

46. Myrl H. Ahrendt

47. Marie Mayo

48. Virginia Titley

49. George Cerbus

50. Jean Lindenschmidt

51. Jom Macholtz

52. Mildred Kiel

53. Glenn Sands

54. Zylpha D. Hurlbut

55. Joseph Batdorf

56. Lawrence Withers

57. Charles Kline

58. Bernice Billings

59. John A. Buehler

60. Ted Smith

PHI (3)

61. Olin Hoffman

62. John W. Skaggs

63. Erwin Detrich

S. M. McClure (Beta)

ABSTRACTS OF STUDENT PAPERS PRESENTED AT THE NATIONAL CONCLAVE OF SIGMA ZETA APRIL, 1951

Demonstration of Direct Current Power Supply

by Winston Grundemeier

Mu Chapter, Mankato State Teachers College, Mankato, Minnesota

The power that is usually furnished by the power companies to our homes is alternating current. For many uses this may be used without rectification, but for radios, electroplating, etc. direct current must be used.

This demonstration power supply in conjunction with a cathode ray oscilloscope has been so made up that by convenient connections and test prods the effect of diode rectification, the effect of capacitance, and the effect of inductance on alternating current may be made visible on the tube of the oscilloscope.

By connecting the test prods to the vertical plates of the oscilloscope

the test prods may be inserted in jacks on the power supply unit to show full alternating current, half wave rectified current, full wave rectified current, the effect of adding inductance to full wave rectified current, the effect of adding capacitance to full wave rectified current, and finally the effect of adding both capacitance and inductance.

The apparatus visibly demonstrates these effects and helps students get a clearer concept of the functions of a power supply.

THE USE OF MERCURY BATTERIES AS STANDARD CELLS

by Dan Eustice

Mu Chapter, Mankato State Teachers College, Mankato, Minnesota

The RM cell, a new alkaline dry cell is under consideration for use as a standard cell. It has a zinc and zinc hydroxide anode and a mercury and mercuric oxide cathode with potassium hydroxide as an electrolyte.

In the past year several of these cells have been tested on a Leeds and Northrup type-K potentiometer. Ten RM-1 cells were tested and they showed an average fluctuation of voltage of .37%. Four RM-3 cells showed an average drop of .25% and four RM-4Z cells showed a fluctuation of .2%.

Nevertheless, these cells are not accurate enough for potentiometer work where .01% accuracy is desired. Some of the fluctuation can be attributed to the variance in temperature of the room during the different readings. Greater accuracy could also be maintained if the cells were built larger as the greater capacity would give greater stability of voltage. However with all things considered they would still not give the strict accuracy needed for potentiometer readings.

Although they aren't accurate enough for potentiometer work, they are the most efficient type of dry cell being used today. They have a larger capacity than any dry cell of equal volume or weight, maintain a constant voltage over long periods of time, and can be stored without loss of potential. This is accomplished mainly because these RM cells utilize its active materials much more completely than the average dry cell.

These cells were used as batteries in walkie-talkies, are used as 'A' batteries in hearing aids and are coming into wide use for equipment requiring small power supplies and having large watt-hour capacities and flat voltage output characteristics.

A SHORT HISTORY OF THE RH FACTOR

by John Bush

Epsilon Chapter, Otterbein College, Weterville, Ohio

In 1938 a physician's wife, who was anemic and had received several blood transfusions, died of erythroblastosis, a name given for a red-corpusele-destroying disease. Many infants upon birth had also been afflicted with erythroblastosis. In the same year a woman physician gave

a logical explanation stating that this disease was due to an inheritable factor which agglutinates in the presence of antibodies.

It was not until 1940 that Landstienner and Wiener discovered this blood factor and found that it is inherited on a genetic basis. At this time they named the factor "Rh" in honor of the Rhesus monkey which was used for the research.

The Rh factor has caused much unnecessary fear among young married couples because of its publicity within the last ten years. This *unnecessary* fear idea is verified by the fact that the disease occurs in less than one per cent of all births.

The disease can be caused only when an Rh positive man marries an Rh negative woman and even then only one out of thirty potential cases ever becomes pathogenetic.

The primary treatment for the disease today is a complete blood transfusion upon birth of the baby. There has also been developed a substance to neutralize the antibodies called "Hapten", however, its development is not yet to the place where it can be an accepted cure.

The original paper was written with thirty-nine references, both of popular and scientific approach.

A SPRING TRIP FOR COLLECTING OHIO AMPHIBIA

by Robert Winner

Epsilon Chapter, Otterbein College, Westerville, Ohio

Mr. Winner gave an interesting account of a successful night trip through cold swamp waters collecting various amphibia, both the caudata or tailed forms, and the tail-less forms, acaudata.

The speaker gave descriptions of the various forms collected and had many live specimens as examples of what could be collected in April in Ohio. Some specimens were shown as preserved forms.

The live amphibia were placed together in a small aquarium at the speaker's table and could be examined by any one wishing to do so. One small frog could not be located for demonstration purposes and it was discovered later that the small frog had been taken as food by a larger frog. The miscreant, a specimen of *Rana virescens*, was observed in the act of swallowing a bullfrog tadpole just at the close of this talk.

Added interest was created by a group of Hylas that started a chorus when they were set in a darkened container beneath the demonstration collection of salamanders and frogs.

Since this lecture-demonstration was the result of actual field experiences, Mr. Winner is to be highly congratulated upon his report.

(The above report was sent in by Fred A. Hanawalt, Otterbein College. Mr. Winner has recently been drafted into the army and so far has not been able to send in his complete report.)

A BRIEF STUDY OF THE TRACE ELEMENTS OF THE SOIL AND THEIR EFFECTS UPON OUR HEALTH.

By Marian Smith

Epsilon Chapter, Otterbein College, Westerville, Ohio

In spite of the great strides that scientists have made down through the years in the fight against disease, the battle is far from being won. The degenerative diseases such as high blood pressure, hardening of the arteries, cancer, and many others still persist, indicating that our bodies wear out before their time.

Scientists say we are starving to death. How could this be in a nation such as ours where everyone has plenty to eat? We may have sufficient food, but that doesn't mean we are getting all of the elements necessary for good health. The food we eat comes directly or indirectly from the soil, so that condition of the soil will determine whether or not our food contains the essential elements.

The major elements necessary for plant and animal life are nitrogen, potassium, phosphorus, sulfur, magnesium, and calcium. The minor or trace elements are iron, manganese, boron, chlorine, iodine zinc, copper, silicon, flourine, and aluminum. We know that these elements were present in virgin soil, but due to basic causes such as leaching, surface washing, and denitrification, our supply of these elements has gradually become depleted. Another big factor in this depletion has been the increase in population all over the world. This increase has caused soils to be over worked; plants have removed the essential elements faster than the forces of nature could replace them.

Nations or individuals, men or animals, we are what we eat. A properly mineral-rich diet predisposes a man to health and normal functioning. The healthier we are, the better we resist disease.

THE BANQUET AT THE NATIONAL CONCLAVE

Rho chapter, Indiana Central College

The banquet of the 22nd annual conclave of Sigma Zeta was held in the dining room of the Anderson Y.M.C.A. An excellent chicken dinner was served followed by a very interesting and informative program. Vocal selections were given by Lowell Williamson, Baritone, and instrumental selections by Ingyr Marie Lien, Violinist. A very humorous and appropriate reading was given by Jacquie Monteith.

The speaker of the evening was Dr. J. C. Boyce, Associate Laboratory Director, Argonne National Laboratory, Chicago, Illinois. The topic was, "Some Peacetime Applications of Atomic Energy."

Dr. Boyce traced the development of Atomic study from the time of Madame Curie down through the years to the present time. Dr. Boyce told of and described several new uses of radio active isotopes. Dr. Boyce also pointed out that the peace time basis and war time basis of Atomic Study are so interrelated that no time would be lost in changing from one project to the other.

A "March of Time" movie called "Report on the Atom" concluded the program.

NEWS FROM THE CHAPTERS

Beta Chapter, April 1951
McKendree College
Lebanon, Illinois

Dear Editor:

At least three of our members plan to attend the spring conclave at Anderson College. They will represent our mathematics, biology and chemistry departments. We have been represented in the last two of the conclaves, and are happy that we will once again be able to join the representatives of other colleges. We are hopeful of making a field trip to some chemical plant around St. Louis in the near future.

A prospective member is planning to join our chapter soon. He is Fred Widicus, mathematics major, who became eligible for membership this semester.

Sincerely,
Charles Ord
Secretary

Sigma Chapter
Our Lady of the Lake College
San Antonio, Texas

Dear Editor:

Initiation of three active and two associate members took place on October 24. The following evening all the members enjoyed the customary banquet at Tai Shan.

Officers for the year are: Mary Ann Dashiell, President; Edith Caster Vice-President; Oralia Cantu, Secretary-Treasurer and Jane Deason, Historian.

At present the members are very busy preparing papers to be presented at the Annual Meeting of The Collegiate Academy of The

Texas Academy of Science at the University of Texas in Austin, on December 7 and 8. Both the Southwest Regional Section of the American Chemical Society and the Senior members of The Texas Academy of Science have their meeting at the same time and place. This gives the Collegiate members a chance to attend some of the papers given by these two organizations and also to attend some of their social functions. The Collegiate Academy members, however, have their own program and business meetings.

Sincerely,
Oralia Cantu
Secretary-Treasurer

Mu Chapter
Mankato State College
Mankato, Minnesota

Dear Editor:

Mu Chapter is looking forward to another successful year, and we have made a good start. Mu Chapter worked in conjunction with the Science Club in homecoming activities which consisted of putting up the reviewing stand for the judges and entering a float in the parade. Our float won third prize. At our last meeting we listened to a talk on the Ultra Centrifuge by Dr. Zell, Assistant Professor of Biological Science at Mankato State Teachers College, which proved to be very interesting and enlightening.

Invitations for membership into Mu Chapter have been sent out to students who are now eligible for membership. On November 15, these new members will be

formally initiated into our organization. This will bring the number of active members to 20 and the number of associate members to 18.

Sincerely,
Joe Kieninger
Editor-Historian

Alpha Chapter
Shurtleff College
Alton, Illinois

Dear Editor:

Last spring, as in previous years, Sigma Zeta sponsored one of the most profitable stands in Shurtleff's annual Kampus Karnival. We retained last year's idea of the pitching game, but this year we substituted horseshoes for pennies. A former horseshoe-pitching champion of Alton's Industrial League presented some difficulties, but we still managed to add a substantial sum to our treasury.

The loss of Lee Markovitch, Jim Stites, and Elwood Reinhart by graduation and Richard O'Hara by recall to the Air Force has greatly reduced our membership. At present we have three active and two associate members. The active members are Jerry Schneider, president; John Vasilof, vice-president; and Margaret Poag, recorder-treasurer. Gordon Frazier and Robert Bockstruck are our remaining associate members. There are, however, more prospects than usual this year, and we are looking forward to increasing our numbers in the near future.

Sincerely,
Wm. Jerry Schneider
President

Lambda Chapter
State Teachers College
Mansfield, Pennsylvania

Dear Editor:

At the regular meeting of Lambda Chapter initiation of new members was the major activity. However, a brief business meeting was held previous to the initiation ceremony, and a few of the items of general interest were: (1) a tour of the Glass Center at nearby Corning, N.Y.; (2) the presentation of an assembly program on the general theme of science.

In October, the semi-annual outing of the Chapter was held at the Grand Canyon of Pennsylvania, near Wellsboro, Pa.

Six new members, five new associate members, and eight of last years associate members who became active members raises our Chapter total to thirty-three members, twenty-eight active and five associate.

We are looking forward to an active and fruitful year. At our September meeting, Doctor Newell A. Schappelle, one of our faculty sponsors, gave a very informative talk on the effects of quality and quantity of light on plants. Having spent over six years in research on this subject and having written his Doctors thesis on this topic, he had much to tell.

Some very well-written and informative papers were given by this year's group of initiates. They were read to the group by the respective authors as a part of the initiation ceremonies. With such interest we are sure to have a good year!

Sincerely,
Robert H. Rodine
Chapter Historian

Xi Chapter
Ball State Teachers College
Muncie, Indiana

Dear Editor:

Xi Chapter of Sigma Zeta had its fall initiation on October 17. Twenty-one students were elected to active membership, and eight students were elected to associate membership. At this meeting nominations were made for election of officers. Paul Henney, South Bend senior was elected president; Gordon Carter, Gaston, Indiana junior was elected vice-president; and Suzanne Bain, South Bend, Indiana junior, was elected secretary-treasurer.

Sincerely,
Suzanne Bain
Secretary

Phi Chapter
Eureka College
Eureka, Illinois

Dear Editor:

Phi Chapter is growing. Our membership this year is up and has the chance to pick up during the year, already we have six new prospects.

On Tuesday evening, November 13, the faculty and student members put on a science program. Freshmen, Sophomores and the general public were invited. The program consisted of several experiments and a talk explaining the purpose and history of Sigma Zeta. After the program coffee and doughnuts were served to a fairly large audience. The program was intended to interest prospective candidates, and from the results, we believe, it has achieved its purpose.

Professor McClure is taking a

vacation during the first two terms and will be back at Eureka College for the third term. George Owcarz, a new member this year, was drafted and is now serving in the army.

Sincerely,
John W. Skaggs
President

Tau Chapter
State Teachers College
East Stroudsburg, Pennsylvania

Dear Editor:

The members of Tau Chapter are planning a trip to New York City on December 8. The trip will include a visit to the Museum of Natural History. While there the Sigma Zetans will attend a matinee performance of "Call Me Madam" and a television show in the evening. The trip is designed to give members of Tau Chapter an educational and recreational holiday.

At our regular meeting on December 3, a local Pathologist will speak on "Cancer". After the address there will be a Christmas party.

Sincerely,
Lorraine Yavorek
President

Gamma Chapter
Medical College of Virginia
Richmond, Virginia

Dear Editor:

The Gamma Chapter has no news to submit for the December issue of The Sigma Zetan. We hope to get well organized and have something interesting to report for the next number.

Sincerely,
Fay Funk
Corresponding Secretary

Epsilon Chapter
Otterbein College
Westerville, Ohio

Dear Editor:

Epsilon Chapter at Otterbein College consists of twenty-three students and eight professors. The members who have been in the organization previous to this year are: Dave Dover, Dan Fallon, Nancy Hampton, Deloris Hopkinson, Max Mickey, Elnora Shaffer, Patricia Stauffer, Don Steck, Roger Wiley and Professors Charles Botts, A. J. Esselstyn, Fred Hanawalt, Lyle Michael, Gordon Woodward, Keith Crane and E. W. Shear.

The members who were recently initiated are: Carolyn Brown, Lawrence Hard, George Hathaway, Mary Alice Holmes, Junior Jacoby, Holland King, Bill Lehman, Marilyn MacDonald, Betty Lee McGregor, Helene Miller, Jerry Neff, Dick Rosensteel, Bill Taylor, Glen Winston, and Professor Bamforth.

The officers are: President, Dan Fallon; Vice-President, Max Mickey; Secretary, Elnora Shaffer; and Treasurer, Deloris Hopkinson. The advisors are Professors Crane and Hanawalt.

We had a very interesting talk recently on "Scientific Crime Detection" by Sgt. F. S. Van Allen of Ohio State Highway Patrol. His talk was illustrated with slides of actual cases.

The program committee is trying to plan equally interesting programs for the remainder of the year.

Sincerely,
Elnora Shaffer
Secretary

Pi Chapter
Millikin University
Decatur, Illinois

Dear Editor:

Last spring the Pi Chapter had a banquet at which Doctor Ireland from Staley's Manufacturing Company spoke on Carbon 14. We are planning to have a field trip the early part of December.

All correspondence to Pi Chapter is to be addressed to Professor Max Bolen of the Physics Department of Millikin University here in Decatur.

Sincerely,
Howard M. Brown
Secretary

Zeta Chapter
Wisconsin State College
Stevens Point, Wisconsin

Dear Editor:

News items for our chapter are still rather scarce. We held our initiation ceremonies on November 7. Eight Associate members and thirteen Active members were welcomed into our group. Refreshments were served afterwards.

Mr. Kenneth Boylon, a member of our college staff, spoke at a previous meeting, on "Fallacies in Mathematics". All the members present found the talk very interesting.

Sincerely,
Wilma Schmuckle
Historian and Press
Representative

Nu Chapter
Northern Illinois State
Teachers College, Dekalb, Ill.

Dear Editor:

This year we find our membership larger and attendance at the meetings meaning more to us. We are now busy making plans for the Junior Academy of Science Fair to be held on the 19th of April, the Warren Jenks Memorial Lecture, and Open House.

The new actives and associates have signed up to plan programs, present student papers, and work on our foyer window. We have

found these committees to be fun and worthwhile in the past. These committees bring us instructional scientific films and speakers.

We entered a car in the Homecoming parade this year and after the football game Sigma Zeta with the Chem, Math, and Biology club sponsored a tea for the first time. We had several alumni attend and plan to continue this from year to year.

Sincerely,
Gertrude Hinsch
Secretary

EDITOR'S NOTE

The suggestion for changing the dates of publication for The Sigma Zetan was found to be an unsatisfactory one. We shall go back to the original dates—December and May. However, the minutes of the Annual Conclave will appear in the December issue. Deadlines for Chapter News are November 15 and April 15.

Sister Mary Clarence

