

## PROGRAM SUMMARY

### Monday, August 25

- 8:00 P.M. Film: "Red River of Life." Fellowship
- 8:00 P.M. Executive Council Meeting

### Tuesday, August 26

- 8:00 A.M. Registration
- 10:00 A.M. Opening Session
- 1:30 P.M. Panel Discussion: The Species Problem
- 2:00 P.M. Special Program for Wives
- 7:15 P.M. Public Meeting: "Sermons from Science"
- 9:00 P.M. Discussion Groups: Science

### Wednesday, August 27

- 7:00 A.M. Devotions  
Field Trips
- 1:30 P.M. General Session
- 2:00 P.M. Special Program for Wives
- 3:30 P.M. Annual Business Meeting
- 7:15 P.M. Public Meeting: "Sermons from Science"
- 9:00 P.M. Discussion Groups: Scripture

### Thursday, August 28

- 7:00 A.M. Devotions
- 8:30 A.M. General Session
- 2:00 P.M. Session on Current Developments
- 7:15 P.M. Public Meeting: "Sermons from Science"
- 9:00 P.M. Closing Devotions

## EXHIBITS

An exhibit of books, publications of the A.S.A. and other organizations, and other material of interest to members will be displayed at the rear of the Gallery. A.S.A. members are encouraged to bring or send material for exhibition, especially books they have written on subjects related to the purposes of A.S.A. Copies of some of the publications displayed may be purchased at the Convention.

Also at the rear of the Gallery will be found maps of Memorial Union, of the College, and of Ames, plus other printed material about Iowa State College, which is celebrating its Centennial this year. Visitors will be welcome in the various College departments, laboratories, libraries, museums, and farms; arrangements may be made through the Convention Chairman. Some summer classes will still be in session during the Convention.

## OFFICIAL PROGRAM



## Thirteenth Annual Convention

of the

## American Scientific Affiliation

(Incorporated)

A group of Christian scientific men, devoting themselves to the task of reviewing, preparing and distributing information on the authenticity, historicity, and scientific aspects of the Holy Scriptures in order that the faith of many in Jesus Christ may be firmly established



August 26-28, 1958  
MEMORIAL UNION  
IOWA STATE COLLEGE  
Ames, Iowa

## GENERAL INFORMATION

### Registration:

The registration desk will be located on the second floor at the entrance to the Gallery, and will receive registrations on Monday from 2:00 to 5:00 and from 6:30 to 8:00 P.M., on Tuesday from 8:00 to 10:00 A.M., and at 1:00 P.M. on Tuesday, Wednesday and Thursday. Please register on the day you arrive.

The registration fee is \$2.00 for A.S.A. members and \$1.00 for other adults who wish to participate in field trips and other Conventian activities. Payment is requested to help defray costs of the Convention; however, all sessions of the Convention and especially the nightly SERMONS FROM SCIENCE are open to the public. Free-will offerings will be taken at the latter to provide for maintenance and transportation of equipment used in the demonstrations.

### Accommodations:

Dormitory-type rooms sharing common baths as well as rooms with private both are available in Memorial Union at prices ranging from \$2.00 to \$4.75 per person per night. Most of these rooms will accomodate only two persons, so family groups wishing to sleep in one room should plan to stay at one of the local motels. Reservations should be made through the Conventian Chairman **before August 15**. After that date, reservations may be made by writing directly to Memorial Union or specific motels. A list of all available accommodations accompanies the Reservation Form.

Meals will be available on an individual basis in the cafeteria on the ground floor. The cafeteria line is open for breakfast from 7:00 to 8:00 A.M.; for lunch from 11:15 A.M. to 1:30 P.M., and for dinner from 5:15 to 7:00 P.M.; at other times the Snack Bar in the Commons is open.

The South Ballroom has been reserved to enable A.S.A. members to eat lunch and dinner together during the Convention. Go through the cafeteria line, then take your tray directly across the Cammons through the double door and up the spiral stairs to the main floor.

Room 59 on the ground floor has been reserved for baby-sitting with small children, but no equipment such as cribs or toys is available. Mothers who wish to use baby-sitting service should bring their own equipment, which may be left in Room 59 throughout the Convention.

The Little Chapel on the ground floor, where morning devotions will be held, is available for private devotional use. The outside entrance is always open even when the entrance through the Browsing Library is closed.

### Meetings:

All sessions, unless otherwise announced, will be held in the Gallery on the second floor.

SERMONS FROM SCIENCE will be held in Great Hall on the main floor.

Please wear your registration badge when attending Convention functions.

### Convention Motto:

"That they may see and know, and consider, and understand together that the hand of the Lord hath done this, and the Holy One of Israel hath created it."

—Isaiah 41:20

(Note: Times are C.S.T. Events in THIS TYPE are described in the following section in order of appearance on the program.)

## PROGRAM

### Monday, August 25

- 8:00 P.M. **Program for Early Arrivals** (Gallery)  
Chairman—Mr. George E. Speake  
Moody Institute of Science Film: "Red River of Life," followed by an informal time of fellowship and devotions.
- 8:00 P.M. **Meeting of Executive Council and Convention Committee** (Room 244)

### Tuesday, August 26

- 7:30 A.M. **Breakfast**
- 8:00 A.M. **Registration**
- 10:00 A.M. **Opening Session**  
Chairman—Dr. Walter R. Hearn  
Invocation—Dr. Brion P. Sutherland  
Welcome and Orientation—Dr. Walter R. Hearn  
Report of the President of A.S.A.—Dr. H. Harold Hartzler  
Report on Local Section Activities—Mr. F. Alton Everest  
**SOME RECENT OBSERVATIONS ON HIGHER EDUCATION**  
In the United States—Dr. H. Harold Hartzler  
In Europe—Dr. David O. Moberg
- 11:30 A.M. **Adjournment**
- 12:00 Noon **Lunch**
- 1:30 P.M. **Panel Discussion: WHAT IS A KIND?—THE SPECIES PROBLEM**  
Chairman—Dr. J. Frank Cassel  
"Species Concepts and Definitions"—INTRODUCTION—Dr. J. Frank Cassel  
**THE GENESIS KINDS IN OUR MODERN WORLD—A Conservative Christian View**—Dr. Frank L. Marsh  
"The Species as a Field for Gene Recombination"—from the viewpoint of genetics—Dr. Donald S. Robertson  
"The Species Problem with Fossil Animals"—from the viewpoints of paleontology and anthropology—Dr. Russell L. Mixer and Prof. James O. Buswell, III.  
"The Difficulties and Importance of the Biological Species"—from the viewpoint of taxonomy—Dr. Wilbur L. Bullock  
General Discussion—Prof. Wayne Frair, and others
- 4:30 P.M. **Adjournment**
- 5:30 P.M. **Dinner**
- 7:15 P.M. **SERMONS FROM SCIENCE**—Mr. George E. Speake
- 9:00 P.M. **Discussion Groups: PROBLEMS ARISING FROM SCIENCE** (Rooms to be announced)
1. Physical Sciences
  2. Biological Sciences
  3. Social Sciences and Education

4. Philosophy of Science
5. Moral Problems of Science  
(Other groups as requested)

10:00 P.M. **Adjournment**

**Wednesday, August 27**

7:00 A.M. **Devotions**—Mr. F. Alton Everest

7:30 A.M. **Breakfast**

**Field Trips:**

7:45 A.M. **MEDICAL AND SOCIAL SCIENCE FIELD TRIP** to Woodward State Hospital-School

8:30 A.M. **GEOLOGY AND NATURAL HISTORY FIELD TRIP** to Ledges State Park

9:00 A.M. **PHYSICAL SCIENCE FIELD TRIP** through Institute for Atomic Research

9:00 A.M. **AGRICULTURAL AND INDUSTRIAL FIELD TRIP** through I.S.C. Dairy Manufacturing Plant

12:00 Noon **Lunch**

1:30 P.M. **ZOOLOGY AND ECOLOGY FIELD TRIP** to Little Wall Lake

1:30 P.M. **General Session**

Chairman—Dr. Irving A. Cowperthwaite  
**FORM AND FUNCTION**—Dr. Theodore N. Tahmision

**LEPROSY IN THE BIBLE**—Dr. Harold M. Spinka

**Reports from Tuesday night's discussions**

3:30 P.M. **Annual Business Meeting**—Dr. H. Harold Hartzler presiding

4:30 P.M. **Adjournment**

5:30 P.M. **Dinner**

7:15 P.M. **SERMONS FROM SCIENCE**—Mr. George E. Speake

9:00 P.M. **Discussion Groups: PROBLEMS ARISING FROM SCRIPTURE** (Rooms to be announced)

1. Creation and Nature of the Physical World

2. Creation and Nature of Life

3. Creation and Nature of Man

4. Social and Moral Problems

(Other groups as requested)

10:00 P.M. **Adjournment**

**Thursday, August 28**

7:00 A.M. **Devotions**—Mr. Raymond S. Hoisington, High school chemistry teacher, Rockford, Ill.

7:30 A.M. **Breakfast**

8:30 A.M. **General Session**

Chairman—Dr. Russell L. Mixter  
**RELIGIOUS PRACTICES IN THE FAMILY**—Dr. David O. Moberg

**TIME TO K.O. OUR CALENDAR CHAOS**—Prof. Herbert A. Meyer

**WORLD PEACE**—Dr. H. Harold Hartzler  
**Reports from Wednesday night's discussions**

11:30 A.M. **Adjournment**

12:00 Noon **Lunch**

2:00 P.M. **Session on Current Developments in Science**

Chairman—Prof. Hendrik J. Oorthuys

**THE NUCLEAR FALLOUT PROBLEM**—Dr. Arthur R. Schulert

Question period and discussion

**FRONTIERS OF SPACE RESEARCH**—Dr. Robert M. Page

Question period and discussion

5:00 P.M. **Adjournment**

5:30 P.M. **Dinner**

7:15 P.M. **SERMONS FROM SCIENCE**—Mr. George E. Speake

9:00 P.M. **Closing Devotions**—Dr. Wallace A. Erickson, President of Wallace A. Erickson & Co., Chicago, Ill.

**SPECIAL PROGRAM FOR WIVES**

**Tuesday, August 26**

2:00 P.M. **Tour of Home Economics Departments** (Assemble in foyer of old wing of the Home Economics Building)

The Division of Home Economics at Iowa State College consists of the Departments of Applied Art, Child Development, Food and Nutrition, Home Economics Education, Home Management, Household Equipment, Institution Management, Physical Education for Women, and Textiles and Clothing. Dr. Charlotte Roderuck, Professor of Foods and Nutrition, will conduct a tour of the Home Economics Building, including the beautiful new wing completed in 1958. Coffee will be served in the building following the tour.

**Wednesday, August 27**

2:00 P.M. **Homemaking and Home Economics** (New Home Economics Auditorium)

Professor Julia Faltinson, Assistant Dean of the Division of Home Economics, will discuss topics of interest to homemakers and answer questions from the audience.

3:00 P.M. **Pointers for Parents** (New Home Economics Auditorium)

Following the showing of the McGraw-Hill film, "Sibling Rivalries and Parents," Dr. Glenn R. Hawks, Head of the Department of Child Development, will discuss relationships between children in the same family, and answer questions from the audience.

**ABSTRACTS OF PAPERS**  
**AND**  
**DESCRIPTION OF PROGRAM EVENTS**

**SOME RECENT OBSERVATIONS ON HIGHER  
EDUCATION**

H. Harold Hartzler, Ph.D.  
Assoc. Prof. of Physics  
Mankato State College, Mankato, Minn.

David O. Moberg, Ph.D.  
Prof. and Chairman, Department of Social Science  
Bethel College, St. Paul, Minn.

Apropos of the post-sputnik emphasis on educational goals and practices, the 1958 Convention opens with brief comments by two of our members who have had recent opportunities to take a fresh look at higher education. Dr. Hartzler, after teaching for twenty years in a Christian college environment, has spent the past academic year teaching at a state-supported college. Dr. Moberg has spent the past academic year in Europe, particularly in Holland, where he has been doing research in sociology.

**WHAT IS A KIND?—THE SPECIES PROBLEM  
INTRODUCTION**

J. Frank Cassel, Ph.D.  
Prof. and Chairman, Dept. of Zoology  
North Dakota Agricultural College, Fargo, N. D.

"What is a kind?" In order to understand the implications of this question, one must understand the basic taxonomic categories, the biological "kinds." Most particularly today biologists are trying to arrive at a generally acceptable and practical unit that can be used by all interested in classifying organisms. That this has not been satisfactorily accomplished (and will not be for some time) is evidenced by the recently published symposium on "The Species Problem" edited by Ernst Mayr for the American Association for the Advancement of Science. There is much discussion not only of the limits of the higher categories, but also of how to define the basic unit to be classified. Much of the trouble lies in semantics—what is our agreed-upon (denoted) definition, and what are the connotations? As Christians we should be discerning in our use of terms as well as critical of our own comments upon these ill-defined or controversially-defined concepts.

To this end, Dr. Marsh will present his original paper outlining a conservative Christian view, and other members of the panel will comment on current trends in the field covered under the same chapter headings in the A.A.A.S. symposium. Biologists on the panel include:

Donald S. Robertson, Ph.D.  
Asst. Prof. of Genetics  
Iowa State College, Ames, Iowa

Russell L. Mixer, Ph.D.  
Prof. of Zoology and Chairman, Div. of Science  
Wheaton College, Wheaton, Ill.

James O. Buswell, III, M.A.  
Asst. Prof. of Anthropology  
Wheaton College, Wheaton, Ill.

Wilbur L. Bullock, Ph.D.  
Assoc. Prof. of Zoology  
Univ. of New Hampshire, Durham, N. H.

Wayne Frair, M.A.  
Asst. Prof. of Biology  
The King's College, Briarcliff Manor, N. Y.

**THE GENESIS KINDS IN OUR MODERN WORLD**

Frank L. Marsh, Ph.D.  
Prof. of Biology and Chairman, Div. of Science and Math  
Emmanuel Missionary College, Berrien Springs, Mich.

In the first chapter of Genesis we read that the basic types of plants and animals were formed by fiat creation. They were given power to reproduce others of their respective kinds. The scholastics of the Middle Ages explained that Genesis taught an extreme fixity of reproduction which produced succeeding generations of individuals that were as identical as coins from a mint. Because Charles Darwin believed Genesis really taught this extreme fixity he rejected the Genesis portrayal of origins and substituted an idea of evolution from simple to complex. Carolus Linnaeus explained modern diversity as having developed through hybridization among basic created units.

In nature today clear-cut discontinuity of basic types of organisms is a very real fact. Evolution of new basic types cannot be demonstrated among either living or fossil forms because the same absence of intergrades occurs among living and fossil types. Genesis 1:12 states that, with regard to plants, reproduction was after their kinds. In the light of this statement we may assume that if two organisms will hybridize they must be members of the same kind. If ability to hybridize is taken as the measure of the Genesis kind among sexual forms, there is no single modern taxonomic unit which appears to be identical with it.

**SERMONS FROM SCIENCE**

George E. Speake, B.S.  
Lecturer, Moody Institute of Science  
Los Angeles, Calif.

For many years these evangelistic demonstrations have been presented in communities and armed service bases throughout the U.S., combining a message as old-fashioned as the Cross of Calvary with a method as modern as tomorrow. More than a ton of electronic and other scientific equipment is used to gain attendance and attention at the public meetings and to bring graphic illustration or convincing confirmation of vital

spiritual truths. The usual series consists of five different messages, but a special three-night program has been arranged for the Convention. It is hoped that publicity on the campus and in the local community will fill Great Hall auditorium, which seats 700. Each lecture-demonstration will begin promptly at 7:15 and end promptly at 8:45 P.M.

### PROBLEMS ARISING FROM SCIENCE

Discussion Groups  
Tuesday Night

The purpose of the Tuesday night discussion groups is to bring to light specific areas of apparent conflict with Biblical Christianity, or current trends in research which may lead to apparent conflicts in the future. How can A.S.A. members best be alerted to these specific problems? By a paper or symposium at the 1959 Convention? Through discussion in the Journal? And what contributions can A.S.A. members make toward resolving these specific conflicts? Should Christians trained in certain fields be encouraged to do research in these areas? Brief reports of the discussions will be presented to the entire Convention on the following day. Members are urged to prepare in advance for these discussions. Groups will be small enough for full participation. A secondary purpose is to acquaint A.S.A. members in each scientific field with each other, to promote fellowship get-togethers at the various notional scientific meetings.

### MEDICAL AND SOCIAL SCIENCE FIELD TRIP

Woodward State Hospital-School, Woodward, Iowa

A tour of this outstanding institution for the care and training of mentally retarded and epileptic children will be conducted by Mrs. Mabel Longshore, Director of Special Services for the Hospital. In addition, a special psychological clinic will be held for those making the trip. The tour and clinic will be informative and impressive but not necessarily pleasant.

Assemble at the parking lot in front of the School, the first building on the Hospital grounds, at 8:30 A.M. Cars necessary; leave Ames by about 7:45 A.M. to allow 40 minutes driving time to Woodward. Limit 40; no children under 18 yrs.

### GEOLOGY AND NATURAL HISTORY FIELD TRIP

Ledges State Park, near Boone, Iowa

In the Ledges State Park where there are many features which have attracted the attention of visitors ever since the country has been known to the white man. It is a region of deep valleys lying as much as 200 feet below the surrounding country. The narrow and steep-sided valleys converge into a main one opening into that of the Des Moines River. On the sides of the main valley are great cliffs of solid rock. The forces of weathering and running water which carved the Ledges valley out of the subsoil are still active today

and can easily be observed. The Ledges abounds with interesting vegetation, and many species of birds and small animals can be seen. The trip will be led by Dr. Charles S. Gwynne, Professor of Geology at Iowa State College. Dr. Gwynne, who is semi-retired after more than thirty years on the College faculty, has published many articles on the geology of the State Parks of Iowa.

Assemble in the parking lot behind the Science Building at 8:30 A.M. The trip will last all morning. Chartered bus. No limit; children welcome on this pleasant outdoor trip.

### PHYSICAL SCIENCE FIELD TRIP

Institute for Atomic Research, Iowa State College

The Institute for Atomic Research, including the Ames Laboratory of the U. S. Atomic Energy Commission, played a leading part in the basic research which led to the large-scale production of fissionable materials. Some of the first uranium to be used in an atomic pile was produced at Ames. Mr. W. E. Dreeszen, Administrative Aid to the Director of the Ames Laboratory, will give a brief orientation lecture and then conduct a tour which will include the rare earth pilot plant, the "hot canyon" where highly radioactive materials are handled safely, the "hot loop experiment" where molten metals are handled, low temperature laboratories, and the small cyclotron, among other stops.

Assemble in the foyer of the Research Building at 9:00 A.M. The tour will last until 11:45 A.M. Cars not necessary. Limit 60; no children below junior high school age, please.

### AGRICULTURAL AND INDUSTRIAL FIELD TRIP

Dairy Manufacturing Plant, Iowa State College

The Department of Dairy and Food Industry at the College operates a complete manufacturing plant with the most modern equipment. The College is famous for its delicious cheeses—Cheddar, Swiss, Edam, and Blue. A leisurely tour will be conducted by Mr. Francis D. Cohenour, Supervisor of the Cheese Laboratory, who will show how market milk, condensed milk, and powdered milk are produced; how the different varieties of cheese are made, aged, and packaged for sale; and, of course, how ice cream is made commercially! After the tour, samples of some of the College products will be served on the patio.

Assemble in the parking lot South of the Dairy Industry Building at 9:00 A.M. This trip will last no more than two hours. Cars not necessary. No limit; a fascinating trip for children and adults and recommended for those desiring a less strenuous trip.

### ZOOLOGY AND ECOLOGY FIELD TRIP

Little Wall Lake, near Jewell, Iowa

This special trip will be conducted on Wednesday afternoon by Dr. Poul L. Errington, Professor of Zoology at the College, if there is sufficient interest. Dr. Errington, an authority on marsh zoology, is the author

of the book "Of Men and Marshes," published by Mac-Millan in 1957 and already widely acclaimed. He has made a thorough study of the animal population at Little Wall Lake, 20 miles North of Ames, and has kept consecutive data on this interesting spot since 1935.

Assemble in the parking lot behind the Science Building at 1:30 P.M. The trip will last all afternoon. Cars necessary. Limit 20; professional biologists preferred, but others welcome.

### FORM AND FUNCTION

Theodore N. Tahmisian, Ph.D.  
Group Leader and Assoc. Biologist  
Argonne National Laboratories, Lemont, Ill.

In the field of biology, as well as in the physical sciences, one may say that a given function necessitates the deposition of elements and sub-atomic structures into a given form.

Nuclei of cells have a function and this function is best performed by a form that is spherical when the cell is in the resting stage. If there is a need for the replication of the nucleus of the cell the form changes, since the function has changed from that of governing to that of duplicating. The chromatin becomes chromatids through intricate morphological changes and finally the chromosomes form and two new cells are born.

The function of striated muscle is contractility used as an aid in voluntary motion. Irrespective of the animal in consideration, striations are the basic form of this tissue. This is not to say that all muscle is genetically related. We know that muscles in various animals are different from the toxicological point of view as far as protein specificity and anaphylaxis are concerned.

Similarly, the intracellular organelles although specific in every species have functions that are common, hence forms that are common. At the molecular levels enzymes are morphologically similar in form and function.

If a substance has a function it must of necessity have an architectural form. If it has a form there must of necessity be one who has formed it. The patterns in the universe are constant from the galaxies to the atoms. This does not say that all patterns have arisen or are self-perpetuating from the same source. It does, however, indicate that the Creator has designed each one in accordance with a master, overall plan.

### LEPROSY IN THE BIBLE

Harold M. Spinka, M.D.  
Chicago, Ill.

A review of Leviticus 13 indicates that the earliest manifestations of today's clinical leprosy, the macule, the burning or itching, the anesthetic areas with self induced burns producing lesions, the appearance of nodules, vesicles, and bullae, with ulceration or decapitation of the bullae producing quick raw flesh, are accurately described in the Bible, having been considered in the differential diagnosis to determine if the patient was clean (non-contagious) or unclean (contagious). It is possible that leprosy, as well as other diseases, e.g., psoriasis vulgaris, syphilis, bullous diseases such as pemphigus, Durhrings disease, prurigo, small pox, fungus infections, and the pyoderms were included

under the general term of leprosy.

The period of 21 days of isolation by the priest allowed the disease to progress under observation to permit a more accurate diagnosis, just as is done today where histo-pathological evaluation is not available. At the end of the 21-day period, the patient was labeled clean (non-contagious) and allowed to rejoin his tribe, or labeled unclean (contagious) and expelled from the confines of the tribal community. It has been stated that leprosy of the Old Testament is not the same as today's leprosy, because the advanced stages of the nodular leonaticus facies, the nerve paralyses, the claw hands, etc. are not recorded as being present. These were the patients already labeled contagious and excluded from the activities and confines of the tribe.

### PROBLEMS ARISING FROM SCRIPTURE

Discussion Groups  
Wednesday Night

The purpose of the Wednesday night discussion groups is to center attention on specific Scripture passages which bear directly or indirectly on scientific phenomena. What aspects need to be more heavily stressed by A.S.A. members? How widely may interpretations differ within a framework of Evangelical Christianity? What are the implications for a Christian philosophy of science? What specific problems could be most fruitfully discussed at our joint meetings with the Evangelical Theological Society? Brief reports of the discussion will be presented to the entire Convention on the following day. Members are urged to prepare in advance for these discussions. Groups will be small enough for full participation.

### RELIGIOUS PRACTICES IN THE FAMILY

David O. Moberg, Ph.D.  
Prof. and Chairman, Dept. of Social Science  
Bethel College, St. Paul, Minn.

In an attempt to test the generally accepted hypothesis that the religious functions of the family are declining, the religious practices of 211 families were compared with those recollected from the childhood families of the husbands and the wives. The families were selected on a quota interviewing basis from sections of the St. Paul, Minn., metropolitan area which represent the various socio-economic characteristics of the total population.

No outstanding differences were found between the religious practices of the present families and the parental childhood families that were compared. The evidence does not support the hypothesis that religious practices are declining in the modern family.

Details of the findings as well as limitations of this study suggest numerous additional topics for further research on the role of religion in the family.

### TIME TO K.O. OUR CALENDAR CHAOS

Herbert A. Meyer, M.A.  
Prof. of Chemistry  
Concordia Teachers College, Seward, Nebr.

The motion of the earth on its axis, the relative motion of the earth and the sun, and the relative motion of the earth and the moon, three incommensurate

motions, have made the reckoning of time a difficult problem through the ages. Our present (Gregorian) calendar is a battle-scarred relic, originated by the old Romans as a 10-month lunar calendar. It was modernized, patterned after an Egyptian calendar, and renamed the Julian Calendar under Julius Caesar in 46 B.C. In it are reflected the superstitions of the ages; it has been in turn paganized, Christianized, modernized, and renamed through the centuries. It now keeps time with the sun in a respectable manner, but that is about all.

A reliable authority estimates that we could save five billion dollars annually by adopting a perpetual calendar. The inconvenience cannot be measured in dollars and cents. While no brief is held for the World Calendar, it appears to be the most acceptable perpetual calendar offered thus far. Its biggest advantage is the few changes necessary from our present calendar. The major Christian churches agree that Scripture is not violated by the acceptance of the World Calendar. In 1961 the proposed World Calendar and our present one coincide, an ideal time to put it into operation.

### WORLD PEACE

H. Harold Hartzler, Ph.D.  
 Assoc. Prof. of Physics  
 Mankato State College, Mankato, Minn.

Who among us is not hoping and praying for world peace? Yet the prospect is for another and more terrible world conflict than we have ever seen. As Christians and as scientists, we need to be much concerned about the matter of world peace. But what are we doing?

In this paper the position is taken that the Christian should be actively working for the cause of world peace. After giving a Biblical background and with some historical introduction, the plea is made that Christians of today need to be aware of present world conditions and lend their support to those agencies which are striving for peace.

### THE NUCLEAR FALLOUT PROBLEM

Arthur R. Schulert, Ph.D.  
 Research Associate  
 Lamont Geological Observatory, Palisades, N. Y.

This paper summarizes the actual physical data on radioactive fallout from nuclear explosions and compares the intensity of radiation from this source with that from natural sources. The author has taken part in the investigations which provided much of the data, particularly on Sr <sup>90</sup>, presented before a Congressional committee in recent and widely publicized hearings. The moral implications of this problem, especially for Christians, are considered in the light of the present world political situation.

### FRONTIERS OF SPACE RESEARCH

Robert M. Page, Ph.D.  
 Director of Research  
 U. S. Naval Research Laboratory, Washington, D. C.

This is a survey paper covering physical research on extra-terrestrial phenomena. It deals with the types of instruments used, the kinds of data obtained, and gives some indication of the scientific deductions made from the data. Making generous use of visual aids, it starts

with the terrestrial environment and expands to lunar characteristics, neighboring planets, solar phenomena, the local galaxy, other galaxies of the universe, and interstellar space. In each spatial category one or more recent discoveries of great scientific interest is identified. A suggestion of the potentialities of some new instruments in the making, such as very large radio telescopes, very high altitude rockets, and satellites, provides a glimpse into the future.

### MEMBERS OF EXECUTIVE COUNCIL

- H. Harold Hartzler, Ph.D. (1960\*), **President**  
 Associate Professor of Physics  
 Mankato State College  
 Mankato, Minnesota
- Wilbur L. Bullock, Ph.D. (1961), **Vice President**  
 Associate Professor of Zoology  
 University of New Hampshire  
 Durham, New Hampshire
- Hendrik J. Oorthuys, M.S. (1958), **Secretary-Treasurer**  
 Associate Professor of Electrical Engineering  
 Oregon State College  
 Corvallis, Oregon
- John R. Howitt, M.D. (1959)  
 Superintendent, Hospital  
 Port Author, Ontario, Canada
- Walter R. Hearn, Ph.D. (1962)  
 Assistant Professor of Chemistry  
 Iowa State College  
 Ames, Iowa
- Editor of the Journal, ex officio**  
 Delbert N. Eggenberger, M.S.  
 Research Chemist  
 Armour and Company  
 Chicago, Illinois

\*Year of retirement from Council

### PAST COUNCIL MEMBERS

- Delbert N. Eggenberger, M.S. (1957)  
 Research Chemist  
 Armour and Company  
 Chicago, Illinois
- Brian P. Sutherland, Ph.D. (1956)  
 Administrative Assistant, Consolidated Mining  
 and Smelting Co.  
 Trail, British Columbia
- Russell L. Mixer, Ph.D. (1954)  
 Chairman, Division of Science and Professor  
 of Zoology  
 Wheaton College  
 Wheaton, Ill.
- J. Laurence Kulp, Ph.D. (1953)  
 Associate Professor of Geology  
 Columbia University  
 New York, N. Y.

- Roger J. Voskuyl, Ph.D. (1952)  
President, Westmont College  
Santa Barbara California
- F. Alton Everest, E.E. (1951)  
Associate Director  
Moody Institute of Science  
Los Angeles, California
- Allan A. MacRae, Ph.D. (1950)  
President and Professor of Old Testament  
Faith Theological Seminary  
Wilmington, Delaware
- Edwin Y. Monsma, Ph.D. (1948)  
Professor of Organic Science  
Calvin College  
Grand Rapids, Michigan
- Marion D. Barnes, Ph.D. (1947)  
Research Chemist  
Lion Oil Company  
El Dorado, Arkansas
- Peter W. Stoner, M.S. (1945)  
Chairman Dept. of Mathematics, Engineering  
Astronomy  
Pasadena City College  
Pasadena, California
- Russell D. Sturgis, Ph.D. (1944)  
Head, Department of Chemistry  
Ursinus College  
Collegeville, Pennsylvania
- Irving A. Cowperthwaite, Ph.D. (1943)  
Plant Engineer  
Thompson Wire Company  
Milton, Massachusetts
- John P. Van Haitsma, Ph.D. (1942)  
Professor of Organic Science  
Calvin College  
Grand Rapids, Michigan

**The Objects of the American Scientific Affiliation are:**

- “(1) To integrate and organize the efforts of many individuals desiring to correlate the facts of science and the Holy Scriptures.
- (2) To promote and encourage the study of the relationship between the facts of science and the Holy Scriptures.
- (3) To promote the dissemination of the result of such studies.”

—Article I of ASA Constitution

Each candidate for membership in the ASA must sign the following statement:

“I believe the whole Bible as originally given to be the inspired word of God, the only unerring guide of faith and conduct. Since God is the Author of this Book, as well as the Creator and Sustainer of the physical world about us, I believe there can be no discrepancies when both are properly interpreted. Accordingly, trusting in the Lord Jesus Christ, the Son of God, my Saviour, for strength, I pledge myself as a member of this organization to the furtherance of its task.

Signed .....

—Article II of ASA Constitution



## CONVENTION COMMITTEE

### General Chairman:

Walter R. Hearn, Ph.D.  
Asst. Prof. of Chemistry  
Iowa State College  
Ames, Iowa

### Program Committee:

Wayne Frair, M.A. (Chairman)  
Asst. Prof. of Biology  
The King's College  
Briarcliff Manor, N. Y.

Wayne U. Ault, Ph.D.  
Research Geologist, U.S.G.S.  
Volcano Observatory, Kilauea Crater  
Hawaiian National Park, Hawaii, T. H.

J. Frank Cassel, Ph.D.  
Prof. and Chairman, Dept. of Zoology  
North Dakota Agricultural College  
Fargo, N. D.

Theodore N. Tahmisian, Ph.D.  
Group Leader and Assoc. Biologist  
Argonne National Laboratories  
Lemont, Ill.