

# **NEW HORIZONS IN SCIENCE**

# Nineteenth Annual Briefing

November 8 through November 12, 1981

Inn on the Lane Columbus, Ohio

Co-Chairmen;
Arthur Fisher Ben Patrusky

# Co-Sponsored by:

Ohio State University Battelle Memorial Institute, Columbus Laboratories National Science Foundation

with an additional contribution from: The American Chemical Society

SUNDAY, NOVEMBER 8 6:00 P.M. to 9:00 P.M.

Registration and Cocktail Party Inn on the Lane (Holiday Inn)

## MONDAY, NOVEMBER 9 8:30 A.M. to 11:30 A.M.

# YAMS, MILK, AND CULTURE: CASE STUDIES IN COEVOLUTION

William H. Durham, Ph.D., Assistant Professor of Anthropology and Human Biology, Stanford University, Palo Alto, Calif.

People in Africa go hungry while yams sit ripening in the fields. New studies suggest that this and other seemingly irrational rituals, myths and taboos make good adaptive sense.

#### THE RESTLESS EARTH

John C. Maxwell, Ph.D., William Stamps Farish Professor of Geological Sciences, University of Texas, Austin

New discoveries about the earth's internal structure call into question long-held beliefs about the forces shaping our planet.

### 2:30 P.M. to 5:30 P.M.

#### QUASARS: VIOLENCE AT THE CENTERS OF GALAXIES

Eugene R. Capriotti, Ph.D., Professor and Chairman, Department of Astronomy, Ohio State University, Columbus

Recent astronomical observations lead to new speculations about these enigmatic cosmological creations.

#### WHO WROTE THE BIBLE?

Richard E. Friedman, Ph.D., Assistant Professor of Hebrew and Comparative Literature, University of California, San Diego

New evidence - - both literary and archaelogical - - brings scholars much closer to unraveling the question of authorship.

#### 6:00 P.M. to 7:00 P.M.

Hospitality Suite Open.

### TUESDAY, NOVEMBER 10 8:30 A.M. to 11:30 A.M.

The morning session will be held at Battelle's Columbus Laboratories. Transportation will be provided.

#### **ARTIFICIAL PHOTOSYNTHESIS**

Robert M. Pearlstein, Ph.D., Battelle Memorial Institute, Columbus Laboratories

Scientists are making significant strides toward mimicking photosynthesis as part of an effort to develop efficient systems for producing fuels and chemicals directly from solar energy.

#### GENETIC ENGINEERING IN PLANTS

Frederick M. Ausubel, Ph.D., Associate Professor of Biology, Harvard University, Cambridge, Mass.

Recent research advances in plant molecular biology could bring about major changes in world agriculture.

11:45 A.M. to 12:45 P.M.

Luncheon hosted by Battelle

1:00 P.M. to 4:30 P.M.

#### OSU AND BATTELLE TOUR

An opportunity to visit with a number of OSU and Battelle investigators in their laboratories. A tour of the Chemical Abstracts Service facility will be available.

6:30 P.M.

#### **COCKTAILS AND BANQUET**

At the OSU Faculty Club. Presentation of the National Association of Science Writers' Science-in-Society Journalism Awards.

# WEDNESDAY, NOVEMBER 11 8:30 A.M. to 11:30 A.M.

#### A BIOLOGICAL THEORY OF HISTORY

Paul A. Colinvaux, Ph.D., Professor of Zoology, Ohio State University

A provocative new theory argues that caste systems, wars, and other political events are consequences of human breeding strategies. If the theory is right, current data predicts: continental wars in Africa, a free society in the Soviet Union, and no involvement of the U.S. or USSR in nuclear war.

#### WEAPONS TECHNOLOGY

Richard L. Garwin, Ph.D., IBM Fellow at the Thomas J. Watson Research Center, Yorktown Heights, N.Y., and Professor of Public Policy, Kennedy School of Government, Harvard University

An eminent weapons authority looks at armaments in the offing: MX missiles, ABM, laser weapons, charged-particle beams, and neutron bombs.

### 2:30 P.M. to 5:30 P.M.

#### **EVOLUTION V. CREATIONISM**

Richard B. Bliss, Ed.D., Director of Curriculum Development and Professor of Science, Institute for Creation Research, El Cajon, Calif.

Robert S. Root-Bernstein, Ph.D., Post-Doctoral Fellow, The Salk Institute, La Jolla, Calif.

Should creationism be taught as science? Two states have passed laws to that effect; more are expected to follow. Constitutionality aside, is such legislation intellectually valid?

#### SOCIAL PHYSICS

Bibb Latane, Ph.D., Professor of Psychology and Director of the Behavioral Sciences Laboratory, Ohio State University

A new unified theory of human interaction helps explain and predict such behavior as stage fright, bystander intervention, tipping in restaurants, and individual productivity in groups. 6:00 P.M. to 7:00 P.M.

Hospitality Suite Open.

# THURSDAY, NOVEMBER 12 8:30 A.M. to 11:30 A.M.

#### **OPEN-SEA MIGRATION**

James D. McCleave, Ph.D., Professor of Zoology, University of Maine at Orano

Many marine animals travel long distances from feeding to spawning grounds. What enables them to navigate with astonishing accuracy?

#### INTEGRATED OPTICS

Carl M. Verber, Ph.D., Battelle Memorial Institute, Columbus Laboratories

This rapidly emerging technology promises to stretch our communications capability beyond that achieved through microminiaturization of electronic circuits.

**ADJOURNMENT** 

# CASW

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