

Program

*Twenty-seventh
Annual Meeting*

*Society for
American
Archaeology*

May 3, 4, 5, 1962



THE UNIVERSITY OF ARIZONA
TUCSON

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of

THE SOCIETY FOR AMERICAN ARCHAEOLOGY

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HOST

for the Twenty-seventh Annual Meeting

THE UNIVERSITY OF ARIZONA

Arizona State Museum

Department of Anthropology

Laboratory of Tree-Ring Research

with the collaboration of

THE AMERIND FOUNDATION

THE TREE-RING SOCIETY

SCHEDULE

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THURSDAY MORNING

MAY 3

Anthropology Building

8:00-5:00 Registration

Liberal Arts, Room 100

9:00 Opening Session:

Presiding: EMIL W. HAURY, Head, Department of Anthropology, and Director, Arizona State Museum, The University of Arizona

Welcome: RICHARD A. HARVILL, President, The University of Arizona

Response: JUNIUS B. BIRD, President, The Society for American Archaeology

THURSDAY MORNING

MAY 3

Liberal Arts, Room 100

ARCHAEOLOGY OF THE
CANADIAN PROVINCES

Chairman: J. NORMAN EMERSON, *University of Toronto*

9:30 CHARLES E. BORDEN, *University of British Columbia*

Anathermal Cultural Assemblages of the Fraser Canyon, British Columbia.

10:00 RICHARD G. FORBIS, *Glenbow Foundation*
Direct Historical Approach in the Prairie Provinces.

10:30 ZENON S. POHORECKY, *University of California, Berkeley*
A Brief Report on Three Seasons of Archaeological Work in the South Saskatchewan Reservoir.

11:00 WILLIAM J. MAYER-OAKES, *University of Oklahoma*
Archaeological Work at Grand Rapids, Manitoba.

11:30 JAMES V. WRIGHT, *National Museum of Canada*
The Ontario Iroquois Tradition.

12:00 RICHARD PEARSON, *Yale University, National Museum of Canada*
Two Traditions in Northeastern North America.

Student Union, Junior Ballroom

ARCHAEOLOGY OF THE
WESTERN UNITED STATES: I

Chairman: CHARLES E. ROZAIRE, *Southwest Museum*

- 9:30 DEE F. GREEN, *Southern Illinois University*
The Hinckley Figurines as Indicators of the
Position of Utah Valley within the
Sevier-Fremont.
- 10:00 FRANK C. LEONHARDY, *University of Oregon*
New Data on the Prehistory of Northwestern
California: A Discussion of the Iron Gate Site.
- 10:30 ROBERT E. GREENGO, *University of Washington*
Archaeology in the Wanapum Reservoir,
Washington.
- 11:00 DON E. DUMOND, *University of Oregon*
An Archaeological Sequence from Southwest
Alaska.
- 11:30 MATTHEW H. HILL, *Southern Illinois University*
A Possible Prehistoric Population Movement in
the Intermontane West.
- 12:00 RICHARD D. DAUGHERTY, *Washington State
University*
The Old Cordilleran and the Intermontane
Western Co-traditions in Western North
America.

Student Union, Senior Ballroom

ARCHAEOLOGY OF THE
SOUTHWESTERN UNITED STATES: I

Chairman: ALAN P. OLSON, *Museum of Northern Arizona*

- 9:30 ELIZABETH M. GELL, *Cambridge, Massachusetts*,
and VOLNEY H. JONES, *University of Michigan*
Distributional Aspects of the Prehistoric Use of
Tobacco.
- 10:00 ROBERT C. EULER, *Arizona State College*
Archaeological Survey of the Colorado River
Gorge through the Grand Canyon of Arizona.
- 10:30 DOUGLAS W. SCHWARTZ, *University of Kentucky*
A Synthesis of Grand Canyon National Park
Archaeology.
- 11:00 DAVID A. BRETERNITZ, *University of Arizona*
Review of the Archaeology of the Flagstaff Area
in the Light of Recent Tree-Ring Studies.
- 11:30 WATSON SMITH, *Peabody Museum West of the
Pecos*, RICHARD B. WOODBURY, and NATHALIE
F. S. WOODBURY, *University of Arizona*
Hawikuh: Resurrection of a Ruin.
- 12:00 FRANK C. HIBBEN, *University of New Mexico*
Additional Prehispanic Paintings from Pottery
Mound, New Mexico.

Anthropology, Room 216

ARCHAEOLOGY OF THE
CENTRAL AND EASTERN UNITED STATES

Chairman: GEORGE I. QUIMBY, *Chicago Natural
History Museum*

- 9:30 MARSHALL MCKUSICK, *State University of Iowa*
Recent Developments in Iowa Archaeology.
- 10:00 ELAINE A. BLUHM, *University of Illinois*
An Indian Site near Rock Island, Illinois: An
Example of Historic Archaeology.
- 10:30 JAMES H. KELLAR, *Indiana University*
A Stratified Rockshelter in Southern Indiana.
- 11:00 JOFFRE L. COE, *University of North Carolina*
The Stratification of Sites in the Alluvial Flood
Plains of the Carolina Piedmont.
- 11:30 DOUGLAS S. BYERS, *R. S. Peabody Foundation*
The Restoration and Preservation of Some Objects
from Etowah.
- 12:00 WILLIAM A. RITCHIE, *New York State Museum*
A Radiocarbon Framework for the Prehistory of
the Eastern United States.

Student Union, Senior Ballroom

Symposium:

ADMINISTRATIVE PROBLEMS
IN EMERGENCY ARCHAEOLOGY

Chairman: FRANK H. H. ROBERTS, JR., *Bureau of
American Ethnology*

- 2:00 JOHN M. CORBETT, *National Park Service*
Administrative Problems of the National Park
Service in a National Emergency
Archaeological Program.
- 2:30 ROBERT L. STEPHENSON, *River Basin Surveys*
Administrative Problems of the River Basin
Surveys.
- 3:00 JESSE D. JENNINGS, *University of Utah*
Administration of Contract Emergency
Archaeological Programs.
- 3:30 FRED WENDORF, *Museum of New Mexico*
Archaeology and Private Enterprise: A Need
for Action.
- 4:00 EMIL W. HAURY, *University of Arizona*
Commentary.

THURSDAY AFTERNOON

MAY 3

Liberal Arts, Room 100

ARCHAEOLOGY OF
ARCTIC NORTH AMERICA

Chairman: CHESTER S. CHARD, *University of Wisconsin*

- 2:00 WILLIAM E. TAYLOR, *National Museum of Canada*
Hypotheses on the Origin of Canadian Thule
Culture.
- 2:30 JAMES W. VANSTONE, *University of Toronto*
Thule Affinities in Recent Netsilik Eskimo Culture.
- 3:00 J. LOUIS GIDDINGS, *Brown University*
The Late "Plano" Points in Alaska.
- 3:30 RALPH S. SOLECKI, *Columbia University*
New Early Man Evidence in Northeastern Alaska,
1961.
- 4:00 JOHN M. CAMPBELL, *George Washington
University*
The Origin of Alaska's "Arctic-Montane" Culture:
A Problem in Culture Change.
- 4:30 GORDON R. LOWTHER, *McGill University*
Culture Area Theory: American Arctic.

THURSDAY AFTERNOON

MAY 3

Student Union, Junior Ballroom

ARCHAEOLOGICAL METHOD AND THEORY

Chairman: ROBERT H. LISTER, *University of Colorado*

- 2:00 Ruth D. Simpson, *Southwest Museum*
Projectile Point Typology Project in Owens Valley.
- 2:30 WILBUR A. DAVIS, *University of Oregon*
The Hypothesis of Technological Systems as an
Analytic Tool for Archaeological Inference.
- 3:00 ARTHUR J. JELINEK, *University of Michigan*
The Paleolithic Revolution and the Peopling of
the New World.
- 3:30 WALTER W. TAYLOR, *Southern Illinois University*
Some Ideas on the Training of Archaeologists.
- 4:00 WILLIAM J. MAYER-OAKES, *University of
Oklahoma*
Complex Society Archaeology.
-

THURSDAY EVENING

MAY 3

Pioneer Hotel, Terrace

6:30 Reception

Pioneer Hotel, Terrace Room

7:30 Banquet

- 9:00 Illustrated narrative: Excavations at
Casas Grandes, Chihuahua
CHARLES C. DiPESO, *Amerind Foundation*

FRIDAY MORNING

MAY 4

Liberal Arts, Room 100

Plenary Symposium:

HOHOKAM ARCHAEOLOGY: 1962

Chairman: ERIK K. REED, *National Park Service*

- 9:00 WILLIAM W. WASLEY, *University of Arizona*
The Hohokam Culture.
- 9:30 RICHARD B. WOODBURY and JOHN Q. RESSLER,
University of Arizona
Effects of Environmental and Cultural Limitations
upon Hohokam Agriculture.
- 10:00 ALFRED E. JOHNSON, *University of Arizona*
Hohokam Occupation and Influence in Southeast-
ern Arizona and Southwestern New Mexico.
- 10:30 INTERMISSION
- 11:00 ALBERT H. SCHROEDER, *National Park Service*
Hohokam Extensions and Influence to the North.
- 11:30 J. CHARLES KELLEY, *Southern Illinois University*
North Mexico and the Hohokam.

FRIDAY AFTERNOON

MAY 4

Liberal Arts, Room 100

Plenary Symposium:

HOHOKAM ARCHAEOLOGY (concluded)

- 1:30 PAUL H. EZELL, *San Diego State College*
Is There a Hohokam-Pima Culture Continuum?
- 2:00 BERNARD L. FONTANA, *University of Arizona*
Mr. Chamberlin's Hypothesis and the Hohokam-
Papago Matter.
- 2:30 EMIL W. HAURY, *University of Arizona*
Commentary.

Liberal Arts, Room 100

BUSINESS MEETING

- 3:15 Annual Business Meeting of the Society for
American Archaeology.

FRIDAY EVENING

MAY 4

Anthropology Building

- 8:00-10:00 Opening ceremony for the new Anthropology
Building, followed by a reception in the
Anthropology and Arizona State Museum
buildings.

SATURDAY MORNING

MAY 5

Liberal Arts, Room 222

TREE-RING DATING

Chairman: BRYANT BANNISTER, *University of Arizona*

9:00 Panel Discussion sponsored by the Tree-Ring Society, beginning with a tribute to ANDREW ELLICOTT DOUGLASS

Participants:

ROBERT E. BELL, *University of Oklahoma*

WARREN W. CALDWELL, *River Basin Surveys*

J. LOUIS GIDDINGS, *Brown University*

EMIL W. HAURY, *University of Arizona*

WILLIAM G. MCGINNIES, *University of Arizona*

JOHN C. MCGREGOR, *University of Illinois*

SATURDAY AFTERNOON

MAY 5

Student Union, Junior Ballroom

12:30 Tree-Ring Society Luncheon. Tickets will be sold at the registration desk (\$1.50) through Friday. The Tree-Ring Society business meeting will follow the luncheon.

West Stadium, Second Floor

2:30-5:00 Open House, Laboratory of Tree-Ring Research.

SATURDAY MORNING

MAY 5

Anthropology, Room 216

ARCHAEOLOGY OF WESTERN MEXICO

Chairman: WALTER W. TAYLOR, *Southern Illinois University*

9:00 ELLEN ABBOTT and J. CHARLES KELLEY, *Southern Illinois University*
Preliminary Report on Excavations at El Cerrito de la Cofradia, Zacatecas, Mexico.

9:30 DUDLEY T. EASBY, *Metropolitan Museum of Art*
Two "South American" Metal Techniques Found in Western Mexico.

10:00 DAVID M. PENDERGAST, *University of Utah*
Prehispanic Metal Working in West Mexico.

10:30 HENRY B. NICHOLSON, *University of California, Los Angeles*
Archaeological and Ethnohistorical Investigations in West Mexico.

11:00 GORDON L. GROSSCUP, *University of Utah*
The Sequence of Ceramics at Amapa, Nayarit.

11:30 CLEMENT W. MEIGHAN, *University of California, Los Angeles*
Ceramic Sequences in Western Mexico.

Anthropology, Room 129

ARCHAEOLOGY OF THE NORTH PLAINS

Chairman: WATSON SMITH, *Peabody Museum
West of the Pecos*

- 9:00 WILLIAM MULLOY, *University of Wyoming*
Stone Circles in the Northwest Plains and Their
Significance.
- 9:30 WESLEY R. HURT, *State University of South
Dakota*
Forager Sites in the Black Hills, South Dakota.
- 10:00 RICHARD P. WHEELER, *National Park Service*
The Angostura Complex.
- 10:30 HENRY T. IRWIN, GEORGE A. AGOGINO, and
CYNTHIA C. IRWIN, *Harvard University*
A Stratified Early Man Site in Wyoming: Peabody
Museum Expedition, 1961.
- 11:00 CARLYLE S. SMITH, *University of Kansas*
Ceramic Stratigraphy at the Stricker Site, South
Dakota.
- 11:30 WALDO R. WEDEL, *U.S. National Museum*
The High Plains and Their Utilization by the
Indian.

Business and Public Administration, Room 111

ARCHAEOLOGY OF THE
CARIBBEAN AND SOUTH AMERICA

Chairman: GORDON R. WILLEY, *Harvard University*

- 1:30 WILLIAM G. HAAG, *Louisiana State University*
An Archaeological Survey of Martinique.
- 2:00 VERLA BIRRELL, *University of Utah*
Textile Traits as Time-Space Markers.
- 2:30 DAVID H. KELLEY, *Texas Technological College*
Investigations on the Far North Coast of Peru.
- 3:00 JUNIUS B. BIRD, *American Museum of Natural
History*
The Technical Skill of Mochica Goldsmiths.
- 3:30 ROBERT E. BELL, *University of Oklahoma*
Preliminary Report upon the 1961 Excavations at
El Inga, Ecuador.
- 4:00 IRVING ROUSE, *Yale University*, and J. M. CRUXENT,
*Instituto Venezolano de Investigaciones
Científicas*
Recent Radiocarbon Dates for the Caribbean Area.

Anthropology, Room 216

ARCHAEOLOGY OF THE
WESTERN UNITED STATES: II

Chairman: ALFRED E. DITTERT, JR., *Museum of
New Mexico*

- 1:30 DEE C. TAYLOR, *Montana State University*
Archaeological Investigations at the Elkhorn
Ranch Site.
- 2:00 GEORGE A. AGOGINO and EUGENE GALLOWAY,
Harvard University
The Sisters Hill Site.
- 2:30 JEREMIAH F. EPSTEIN, *University of Texas*
Paleo-Indian Burin Base Points.
- 3:00 DAVID GEBHARD, *University of California, Santa
Barbara*
The Distribution and Chronological Sequence of
the Petroglyphs of Wyoming.
- 3:30 RICHARD SHUTLER, JR., *Nevada State Museum*
Problem of the Conflicting Radiocarbon Dates for
the Archaeology and Geology of the Lake
Lahontan and Lake Bonneville Basins.

Business and Public Administration, Room 110

ARCHAEOLOGY OF THE
SOUTHWESTERN UNITED STATES: II

Chairman: PAUL S. MARTIN, *Chicago Natural
History Museum*

- 1:30 ROY L. CARLSON, *University of Colorado*
Basketmaker III Sites near Durango, Colorado.
- 2:00 ALAN P. OLSON, *Museum of Northern Arizona*
The Cross Canyon Group, Eastern Arizona.
- 2:30 WILLIAM A. LONGACRE, *Chicago Natural History
Museum*
A Synthesis of Upper Little Colorado Prehistory,
Eastern Arizona.
- 3:00 ARTHUR H. ROHN, *National Park Service*
Soil and Water Conservation on Chapin Mesa,
Mesa Verde National Park, during Pueblo III.
- 3:30 ALEXANDER J. LINDSAY, JR., and J. RICHARD
AMBLER, *Museum of Northern Arizona*
Soil and Water Conservation in the Glen Canyon
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- 4:00 DON D. FOWLER, *University of Utah*, and C.
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A Preliminary Report of 1961 Excavations on the
Kaiparowits Plateau, Southern Utah.

Anthropology, Room 219

GENERAL PAPERS ON ARCHAEOLOGY

Chairman: BERNARD L. FONTANA, *University of Arizona*

- 1:30 RUTH G. WOLPER, *New World Museum*
Archaeological Factors Contributing to Columbus' Landfall, 1492.
- 2:00 REX E. GERALD, *El Paso Centennial Museum*
Spanish Presidios of the Late Eighteenth Century.
- 2:30 E. MOTT DAVIS, *University of Texas*
Mound Building in the Titus Focus of Northeastern Texas.
- 3:00 SAMUEL W. BEEMAN, *Hillsborough, California*
A Design Test of Sixteen Principles of Design Applied to Decorated Pottery of the Hohokam Culture (A.D. 1-1400).
- 3:30 ROBERT J. DRAKE, *University of British Columbia*
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SPECIAL EVENTS

THURSDAY EVENING

- 6:30 Reception on the Terrace of the Pioneer Hotel.
- 7:30 Banquet in the Terrace Room of the Pioneer Hotel. Western and Mexican dishes served from the buffet. All you can eat. Entertainment by the Jaycee-ettes (cancan girls). Tickets \$4.00 at registration.
- 9:00 Excavations at Casas Grandes, Chihuahua. This slide-show will be narrated by CHARLES C. DiPESO, Director of the Joint Casas Grandes Expedition, and it will follow the banquet in the Terrace Room of the Pioneer Hotel. No charge.

FRIDAY EVENING

- 8:00-10:00 Opening ceremony for the new Anthropology Building, followed by a reception in the Anthropology and Arizona State Museum buildings.

SATURDAY AFTERNOON

- 12:30 Tree-Ring Society Luncheon in the Junior Ballroom of the Student Union. Those planning to attend may purchase tickets (\$1.50) at the registration desk through Friday. A business meeting of the Tree-Ring Society will follow the luncheon.
- 2:30-5:00 Open House, Laboratory of Tree-Ring Research, on the second floor of the West Stadium.

SUNDAY MORNING

- 10:00 Excursion to the Amerind Foundation near Dragoon, Arizona. Sign up for this event at the time of registration. The Amerind Foundation will be host for a barbecue luncheon. A fee will be charged for transportation only.

FIELD TRIPS

Other field trips can be arranged during the course of the meetings for Sunday and the days following. Details will be available at the time of registration.

Abstracts of Papers

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*Society for
American Archaeology*

THE UNIVERSITY OF ARIZONA

TUCSON

1962

A B S T R A C T S O F P A P E R S

presented at the

Twenty-seventh Annual Meeting

of the

SOCIETY FOR AMERICAN ARCHAEOLOGY

edited by

William W. Wasley

and

Raymond H. Thompson

The University of Arizona

Tucson

1962

ABSTRACTS OF PAPERS

arranged alphabetically by author

Abbott, Ellen and J. Charles Kelley

Preliminary Report on Excavations at El Cerrito de la Cofradia, Zacatecas, Mexico

During the month of November, 1961, Southern Illinois University excavated a residential site of the Alta Vista phase of the Chalchihuites culture, approximately three miles west of Chalchihuites. Information was obtained on the characteristic artifacts of the Alta Vista phase and on the architectural and artifactual complex of a residential site as opposed to a ceremonial site. The evidence also, in part, supported a Classic horizon correlation for the Alta Vista phase and indicated its contemporaneity, in part at least, with the Malpaso-Canutillo culture.

Agogino, George A. and Eugene Galloway

The Sisters Hill Site

The Sisters Hill site (48J0314), located on the southeast bank of a dry arroyo ten miles southwest of Buffalo, Wyoming, has produced projectile points similar to Hell Gap and Agate Basin specimens. This site, excavated during the 1960 and 1961 seasons by a University of Wyoming student crew aided by members of the Wyoming Archaeological Society, has produced artifacts from a cultural horizon 17 feet below the present surface and with a radiocarbon date of 7689 B.C.

Beeman, Samuel W.

A Design Test of Sixteen Principles of Design Applied to Decorated Pottery of the Hohokam Culture (A.D. 1-1400)

The test will show: (1) the quality of each culture phase from earliest to latest, (2) the cultural peak on the time scale, (3) the length of time culture remained at its peak, (4) the period on the time scale of most accelerated develop-

ment, (5) measurement in objective terms of the total success of a culture at its terminal date, and (6) the basis for a useful card index system.

Bell, Robert E.

Preliminary Report upon the 1961 Excavations at El Inga, Ecuador

Excavations at El Inga in the Andean highlands have produced fluted points and other specimens suggesting a Paleo-Indian occupation. The assemblage of excavated artifacts is similar to that collected from the surface. Various kinds of projectile points were recovered, including fluted "fish-tail" forms similar to those from Fell's Cave in Chile, and in addition a variety of chipped stone tools.

Bird, Junius B.

The Technical Skill of Mochica Goldsmiths

Study of two gold earspools reveals the craftsmanship employed by Peruvian metalworkers of this period.

Birrell, Verla

Textile Traits as Time-Space Markers

The use of textiles as time-space indicators of culture is a comparatively new approach in archaeological analysis. Careful stratigraphic excavations in refuse mounds in Peru are uncovering textile artifacts which may be analyzed, classified, and tabulated to substantiate the ceramic analyses drawn from the same sites. The various tables presented in this paper indicate the possible range of textile traits which may serve as topics of special consideration and research. A brief summary will be given of the findings of research on textiles recovered from ancient sites on the south coast of Peru.

Bluhm, Elaine A.

An Indian Site near Rock Island, Illinois: An Example of Historic Archaeology

During the summers of 1959 and 1960 the University of Illinois excavated a historic Indian site on the south side and near the mouth of the Rock River. The site was occupied about 1800, a little too early for definite documentation in this area. Probably the inhabitants were Sauk. Eight houses, numerous storage pits, and 29 burials were recovered. Archaeological information plus ethnohistoric records provide a basis for more detailed economic, demographic, historic and ethnographic reconstruction than is usual in the archaeological situation.

Borden, Charles E.

Anathermal Cultural Assemblages of the Fraser Canyon, British Columbia

At a deeply stratified site some 100 miles up the Fraser River, the three earliest cultural layers have radiocarbon dates of 7050, 6200, and 5400 B.C., respectively. In the early levels there are hearths, stake holes, a wide variety of stone artifacts, and quantities of charred pits of a wild cherry. This edible fruit ripens in the late summer, when the biggest salmon runs ascend the river, hinting that these anadromous fish may have been a major food staple even 9000 years ago.

Breternitz, David A.

Review of the Archaeology of the Flagstaff Area in the Light of Recent Tree-Ring Studies

Thomas P. Harlan has determined 596 new tree-ring dates for Flagstaff archaeological sites. These dates are correlated with the associated pottery from each site. Dates for Kayenta Anasazi pottery types are, in general, supported by the new information. Minor date adjustments for certain pottery types are important because much of the Kayenta Anasazi chronology is based on dated sites from the Flagstaff region.

Archaeological interpretation suggests a slightly altered date for the eruption of Sunset Crater. "Sinagua" still best describes the potpourri of Flagstaff archaeology.

Byers, Douglas S.

The Restoration and Preservation of Some Objects from Etowah

Copper plates recovered by Moorehead from Mound C, Etowah, were afflicted with "malignant patina" which was destroying them. They were cleaned by the Fink electrochemical process. Details of construction and decoration became apparent after the objects were cleaned. One bi-lobed arrow carries profiles of two individuals in ceremonial dress; one may be the Long-Nosed God. Textile from Mound C required treatment before it could be mounted for exhibition. This process is described, including the preparation of the plexiglass sandwich in which the textile is sealed.

Campbell, John M.

The Origins of Alaska's "Arctic-Montane" Culture: A Problem in Culture Change

The most recent archaeological horizon in high localities of the central Brooks Range unmistakably testifies to the direct coastal Eskimo origins of the "Nunamiut" who presently occupy those mountains. Nunamiut archaeology also implies that these caribou hunters permanently settled in the Brooks Range not more than 200 to 400 years ago. Therefore rapid environmental shift and economic adaptation apparently occurred in Nunamiut society without, however, correlative change in other major spheres of the culture. Culture change theory is discussed in terms of the Nunamiut.

Carlson, Roy L.

Basketmaker III Sites near Durango, Colorado

Four excavated sites indicate a late Basketmaker III occupation in the A.D. 760's. Traits present are single pit

houses with either four or six support posts, eastern or southeastern entrance, bench either present or absent, pole and tute walls, and adjacent small surface structures. Two sites exhibit encircling rings of cobblestones. Pottery consists of Durango varieties of Lino Gray and Black-on-gray, and a local brown ware. Corn, beans, the atlatl, the bow and arrow are present. This presentation is part of the NSF-supported program of preparing reports on the unpublished archaeological data collected by Earl Morris.

Coe, Joffre L.

The Stratification of Sites in the Alluvial Flood
Plains of the Carolina Piedmont

The Piedmont of North Carolina is an area of rolling hills and extensive erosion. Cultural materials of all ages are found mixed on the surface, and midden deposits of substantial depth are entirely absent. Only in the narrow flood plains of the rivers of this area is there a possibility of recovering separated remains of distinct cultural complexes. Since 1949 researchers in North Carolina have been particularly successful in locating buried occupation zones of short duration and of considerable antiquity. These data have been very useful in constructing a clearer concept of the Eastern Archaic.

Corbett, John M.

Administrative Problems of the National Park Service
in a National Emergency Archaeological Program

There are several broad basic problems in any attempt to administer a national emergency archaeological salvage program: (1) conflicting or out dated laws, regulations, and rules, both Federal and State; (2) difficulties of coordinating the planning, financing, and actual operation of the salvage program with the activities of the agency causing the potential destruction; (3) communication and reporting between various levels and stages of the program; (4) personnel and personality difficulties. These problems are discussed in brief with examples and possible solutions offered. Suggestions are sought as to how these matters might be better adjusted.

Daugherty, Richard D.

The Old Cordilleran and the Intermontane Western Co-traditions in Western North America

Two distinct, but perhaps related, cultural co-traditions may be recognized in the early prehistory of the Northwest. The Old Cordilleran tradition was confined largely to the foothill provinces of the Cascade range, and perhaps had an even greater distribution in similar environments. Coexisting with the Old Cordilleran tradition was the Intermontane Western tradition, extending throughout the intermontane region between the Cascade-Sierra ranges and the Rockies.

Davis, E. Mott

Mound Building in the Titus Focus of Northeastern Texas

A group of ceremonial sites in the Ferrell's Bridge Reservoir contains small mounds, most of which cover the remains of ceremonial structures that were built and destroyed, one after the other, in the same spot before the mound was erected. Possible reasons for this practice are examined on the basis of archaeological and ethnohistoric evidence. It seems very likely that the mounds were constructed in connection with anxiety-producing situations, the nature of which is obscure.

Davis, Wilbur A.

The Hypothesis of Technological Systems as an Analytic Tool for Archaeological Inference

A technological system consists of all the theoretically possible alternative technical sequences capable of producing a class of similar artifacts. The area of investigation derived from this hypothesis covers the structure and dynamics of archaeological systems, the development of their constituent technical sequences, and the observed discrepancies between actual technological systems and their theoretical counterparts. The technological-systems concept complements the analytic-classification approach in studies of culture change.

Drake, Robert J.

Processing Animal Remains from British Columbian Archaeological Sites

Varied faunal remains, consisting of 992 lots, are being studied for indications of biotic change during the last 3000 years in southwestern British Columbia. Methods of processing developed for the materials are described and compared with methods of working faunal materials in archaeology recommended by Gilmore, Cornwall, and others.

Dumond, Don E.

An Archaeological Sequence from Southwest Alaska

Work by the University of Oregon in 1960 and 1961 in Katmai National Monument on the Alaska Peninsula has produced a radiocarbon-dated sequence spanning about 4000 years. The earliest occupation yielded small well-flaked implements of chalcedony reminiscent of the Denbigh Flint complex. Later occupations produced implements predominantly of flaked stone, rubbed implements of later Eskimo type, and post-contact artifacts. One cultural phase included series of shouldered and barbed chalcedony projectile points of types apparently hitherto little known in the area.

Easby, Dudley T., Jr.

Two "South American" Metal Techniques Found Recently in Western Mexico

A recent find at Uruapan, Michoacán, disclosed two metal-working techniques commonly associated with South America but not with Mexico or the intervening area: (1) hammering or pressing a series of identical sheet gold ornaments over a pattern or model carved in high relief, and (2) making decorative spirals of worked (as opposed to cast) gold wire.

Epstein, Jeremiah F.

Paleo-Indian Burin Base Points

A number of New World sites have produced Paleo-Indian projectile points that demonstrate intentional use of the burin technique. These points are illustrated and described. Comparisons are made with Archaic points from Texas that show additional examples of the burin technique. The data indicate that the burin was an integral part of Clovis, Angostura, and Plainview technologies, but not, apparently of Folsom. It is suggested that some of the Early Man cultures in the New World derive from an Upper Paleolithic base.

Euler, Robert C.

Archaeological Survey of the Colorado River Gorge through the Grand Canyon of Arizona

Thirteen occupation areas, including the six recorded by Taylor in 1953, were located during a ten-day, 312 mile survey by boat down the Colorado River from Lee's Ferry to Lake Mead. These relate prehistorically to the Kayenta and Virgin branches of the Anasazi and historically to the Hopi and the Southern Paiute.

Ezell, Paul H.

Is There a Hohokam-Pima Culture Continuance?

This question, which was answered affirmatively as early as 1716 by Manje and more recently by Gladwin and Hauray, is reviewed in terms of trend and tradition through the archaeological and ethnographic sequence, ceramic, architectural, and other comparisons, the acculturation history of Pimas and Yumans, the broader context of the post-contact period, and the complete lack of documentary evidence for the little-known historic Pima. Although aboriginal Pima culture is seen as a product of multiple cultural influence, the concept of a Hohokam-Pima continuance is provisionally accepted.

Fontana, Bernard L.

Mr. Chamberlin's Hypotheses and the Hohokam-Papago Matter

As long ago as 1892 the geologist, T. C. Chamberlin, noted that there are at least three kinds of hypotheses: the ruling hypothesis; the working hypothesis; and the multiple working hypothesis. Many attempts to explain Hohokam-Papago relationships have been of the ruling hypothesis variety. The Hohokam-Papago problem will not be satisfactorily solved until more excavating is done. Until such time multiple working hypotheses, seven of which are offered here, should be considered. Supporting data for one of these hypotheses has been recovered recently in excavations at San Xavier del Bac.

Forbis, Richard G.

Direct Historical Approach in the Prairie Provinces

A review of attempts to link historic Plains tribal units with archaeological manifestations in southern Alberta, Saskatchewan, and Manitoba includes a discussion of the problems involved. The direct historical approach is seldom applicable, and other methods, more fallible, will have to be used.

Fowler, Don D. and C. Melvin Aikens

A Preliminary Report of 1961 Excavations on the Kaiparowits Plateau, Southern Utah

The 11 excavated sites include pit houses, storage sites, small pueblos ranging from three to 20 rooms in size, and an anomalous above-ground kiva. There is an interesting pattern of settlement and intensive occupation by Puebloid peoples during a relatively short period of time. Cultural affiliations are with the Kayenta Anasazi to the south and with the so-called Virgin Branch of the Kayenta to the west. Ceramics from the Plateau should aid in clarifying the relationships between the Kayenta, the Virgin Branch, and the Fremont cultures in southern Utah.

Gebhard, David

The Distribution and Chronological Sequence of the
Petroglyphs of Wyoming

The rock drawings of Wyoming are divided into four basic styles, each of which may be subdivided on the basis of minor stylistic and possible chronological differences. Types 1, 3, and 4 are found throughout the state and in adjacent areas as well, while Type 2 is confined to the Wind River and Big Horn Basin regions. The earliest of these drawings (Type 1) may be associated with the late Middle Prehistoric Period. Types 2 and 3 seem to fall into the first centuries of the Late Prehistoric Period, while Type 4 dates from the late 18th and early 19th centuries. The major stylistic influences came from the Great Basin and to a certain extent from the adjacent plateau and mountain areas. During the late 18th and 19th centuries the major influences came from the Plains.

Gell, Elizabeth Morris and Volney H. Jones

Distributional Aspects of the Prehistoric Use of
Tobacco

Botanical and chemical identification of Nicotiana attenuata in several types of use in Basketmaker caves in the Prayer Rock District, Arizona, has awakened interest in the archaeological distribution of the use of this plant. These uses include smoking, sucking, eating and ceremonial offering. Direct evidence can be derived from ethnographic records made at the time of historic contact and specific occurrences in archaeological contexts. Circumstantial evidence is seen in the occurrence of such items as pipes and cane cigarettes. Distributions of tobacco and the associated artifacts are noted in detail.

Gerald, Rex E.

Spanish Presidios of the Late Eighteenth Century

The El Paso Centennial Museum archaeological survey crew has visited ten presidio sites in northern Chihuahua, established

the pottery types in use during the period 1772-1800, accurately located the sites geographically, and made relatively accurate plans of the presidios which were built according to specifications of the Royal Regulation of September 10, 1772. Notable changes were observed between pre- and post-1772 presidio plans.

Giddings, J. Louis

The Late "Plano" Points in Alaska

Sites in Arctic and western Alaska have recently produced a range of large projectile points related in form to those of post-Folsom or "Plano" sites of the western states and Canada. Some of these forms found under unstratified conditions have been proposed by some as representing the earliest Alaskan cultures. On the other hand, stratified sites from Cape Prince of Wales to Kotzebue Sound and the neighboring interior indicate a wide range of such points as post-Denbigh. A cache of 75 such objects shows several forms to have been used contemporaneously about 1500 B.C.

Green, Dee F.

The Hinckley Figurines as Indicators of the Position of Utah Valley within the Sevier-Fremont

Twenty ceramic figurines of the Fremont type discovered at the Hinckley site west of Utah Lake, Utah are discussed along with the two other finds previously made in Utah Valley. Comparisons are drawn with figurines from the Fremont and Sevier-Fremont areas. The Utah Valley is hypothesized as a cultural center for the northern extension of the Sevier-Fremont, and the name, Provo-Fremont, is suggested for it.

Greengo, Robert E.

Archaeology in the Wanapum Reservoir, Washington

The Wanapum Reservoir extends for 38 miles along the middle Columbia River between the upper Priest Rapids Reservoir and

the Rocky Reach Dam. Intensive exploitation of available food resources is indicated by a variety of occupation sites distributed along both sides of the river. Salvage excavations by the University of Washington at 15 sites provide important new data on house types and a sequence for the entire reservoir which is compared with those in the Vantage area and at Priest Rapids.

Grosscup, Gordon L.

The Sequence of Ceramics at Amapa, Nayarit

An analysis of potsherds from four pits reveals a large number of different types. Five ceramic phases are postulated and a sixth is suspected. Correlations have been made with sequences defined by Isabel Kelly and Gordon Ekholm in Sinaloa and some support is given to J. Charles Kelley and Howard D. Winters' revision of Isabel Kelly's sequence. While some evidence exists for a migration into the area at the beginning of the third ceramic phase, it is not felt to be the kind of long distance migration postulated by Ekholm. A great deal of local diversity in ceramics is evident.

Haag, William G.

An Archaeological Survey of Martinique

Martinique is one of the larger islands of the Lesser Antilles. Virtually no English language archaeological reports exist for it and very little has been published in French. Several months of survey and excavation were undertaken in 1961. Although sites of differing content were found, pottery seriation indicates a cultural continuum.

Hibben, Frank C.

Additional Prehispanic Paintings at Pottery Mound, New Mexico

The Pottery Mound murals are done in fresco secco on thin layers of finely prepared adobe plaster, with an exceptionally

large palette of colors, by a number of artists differing in ability, and over a long period of time. More than 200 paintings or groups of paintings have been found representing by far the largest collection of prehispanic paintings from the American Southwest. The paintings present a large number of human, animal, vegetable, and abstract forms with great variation. In general, the paintings are more sophisticated than those at Kuaua and Awatovi. The Pottery Mound murals show stronger affinities with those at Awatovi both in artistic treatment and in subject matter.

Hill, Matthew H.

A Possible Prehistoric Population Movement in the Intermontane West

The spatial-temporal distribution of several material traits in the Intermontane West indicate considerable Great Basin influence in the Southern Columbia Plateau during the latter half of the first millennium A.D. Certain ethnographic correspondences between Basin and Plateau are detailed. Both the archaeological and the ethnographic facts may be explained by a population movement from the Basin to the Plateau. Some suggestions are made concerning the role of this movement in the development of proto-historic Plateau culture.

Hurt, Wesley R.

Forager Sites in the Black Hills, South Dakota

As a result of a highway salvage archaeological program sponsored by the University of South Dakota in the northern Black Hills, several sites belonging to the "Forager" complex have been surveyed and partially excavated. The main feature of these camp sites is the closely placed series of hearths filled with fire-cracked rocks. Projectile points include the indented base lanceolate points of the McKean type and the shallow side notched points of the Duncan type. Other artifacts are indicative of a food collecting people. The culture complex appears related to the Basin or Desert cultures rather than to that of the typical Plains hunting traditions. A radiocarbon date of 2170 B.C. has been obtained.

Irwin, Henry T., George A. Agogino, and Cynthia C. Irwin

A Stratified Early Man Site in Wyoming: Peabody
Museum Expedition, 1961

The Hell Gap site, southeastern Wyoming, offers evidence concerning a series of paleo-Indian cultures: Hell Gap, Folsom, Angostura, Eden-Scottsbluff, and Agate Basin, as well as several more recent preceramic horizons. Radio-carbon analysis dates the paleo-Indian occupation from approximately 9000 to 6500 B.C. The importance of the site lies in the clear stratigraphic separation of the levels and the camp debris which provides knowledge of the living habits of Early Man.

Jelinek, Arthur J.

The Paleolithic Revolution and the Peopling of the
New World

While the significance of the Neolithic and Urban revolutions in prehistoric cultural development has been recognized for many years, the importance of the transition from a Lower to an Upper Paleolithic way of life has not generally received attention as a comparable cultural achievement. It is suggested that the most significant feature of this Paleolithic revolution was man's cultural adjustment to environmental conditions which had previously required biological modification. The implications of this revolution for the peopling of the New World are discussed in the light of recent paleo-ecological and chronological information.

Jennings, Jesse D.

Administration of Contract Emergency Archaeological
Programs

Contract emergency research is seen as sharing essentially the same limitations as other emergency work: the pressure of time; an arbitrary restriction of geographic area of study; the obligation to sample adequately the full range of cultures represented; and the possible problem of dealing with a

large volume of data. The contract additionally carries with it the stipulated deadline for the completion of an acceptable report. These limitations are advantageous.

Johnson, Alfred E.

Hohokam Occupation and Influence in Southeastern Arizona and Southwestern New Mexico

Archaeological investigations in this area during the past half-century have produced a large body of information on the local development of culture. Occupation began at least 10,000 years ago, then changed through a series of preceramic stages until the introduction of pottery about A.D. 1, after which a major problem is the relationship of the Hohokam and Mogollon. In general, after A.D. 1, most of the early sites seem to have Mogollon affiliations. Later, Hohokam peoples expanded into southeastern Arizona and strongly influenced the Mogollon. Differences between this interpretation and others are discussed.

Kellar, James H.

A Stratified Rockshelter in Southern Indiana

Partial excavation of 8 feet of midden in a large rockshelter produced materials from a culturally and physically stratified context. Pottery was generally restricted to the upper two feet and included Early and Middle Woodland, Yankeetown, and Middle Mississippi wares. The bulk of the deposit resulted from the activity of "archaic" populations. Materials from all levels suggest use differences when compared with open sites of similar age in the same region, especially during the later occupations.

Kelley, David H.

Investigations on the Far North Coast of Peru

The results of reconnaissance and minor excavations in the area north of Lambayeque are summarized. The ecologically

important zones are desert, foothills, valleys, and coast. Sites in the first three zones are briefly discussed; those on the coast from south of Sechura to the Chira River are more fully described. The shellfish-gathering cultures of several periods are defined, as well as the sea-mammal hunting, cooper-using, culture of the Colan period which seems to precede the Chusis culture of Gallinazo I affinities.

Kelley, J. Charles

North Mexico and the Hohokam

Fairly clear relationships with Mesoamerica are apparent in the first Hohokam decorated pottery, seemingly derived from a generalized Chupicuaro source. Late Pioneer Hohokam stylistic changes in ceramic decoration indicate contact with the Mesoamerican Chalchihuites culture. Chalchihuites influence increased during Colonial and Sedentary times, but diminished in late Sedentary and Classic when the late Aztatlán culture of Sinaloa strongly influenced the Hohokam.

Leonhardy, Frank C.

New Data on the Prehistory of Northwestern California:
A Discussion of the Iron Gate Site

Iron Gate 2 is a small village on the Klamath River with conical bark-covered structures which differ from the rectangular plank houses of the Shasta Indians in whose tribal area the site is located. This evidence suggests that circular houses preceded rectangular plank houses in northwestern California and southwestern Oregon.

Lindsay, Alexander J., Jr. and J. Richard Ambler

Soil and Water Conservation in the Glen Canyon Basin

Structures for soil and water control, built by the Kayenta Anasazi between the 11th and 13th centuries are: ditches,

terraces, linear and grid borders, reservoirs, and possibly windscreens. Favorable soil and water conditions were intensively utilized by various combinations of these structures along sandy ridges, in gullies and depressions, and on relatively flat ground. Associated domestic structures, usually one to three rooms, are located on elevated ground normally not suitable for agriculture.

Longacre, William A.

A Synthesis of Upper Little Colorado Prehistory,
Eastern Arizona

Changes in complexity in the 3000-year cultural sequence are examined and an explanation in terms of adaptive and exploitive techniques is attempted. After the introduction of agriculture, the following changes in the complexity of the socio-cultural factors are probable: modification of the economy and social organization; establishment of village-farming communities; rapid increase of population; and eventually, planned towns and formation of inter-village social units with strong politico-religious bonds.

Lowther, Gordon R.

Culture Area Theory: American Arctic

Much of the criticism directed at the heuristic concept of culture areas is due to disparities of a linguistic and a logical kind. Certain changes in terminology might remove some of the linguistic difficulties, while examination of the structure of the concept reveals the necessity for a tautological element. This compels the examination of certain principles of method, especially as they relate to exclusive categories. These considerations are relevant to the American Arctic viewed as a prehistoric culture area. The relative simplicity and the extremity of the example make possible a test of the validity of the culture area concept as a whole.

Mayer-Oakes, William J.

Archaeological Work at Grand Rapids, Manitoba

During the summer of 1961, 39 sites were located, five were tested, and one was excavated in the area to be flooded by the Grand Rapids Hydroelectric Project. The excavation of the Trailrace Bay site produced evidence for a series of occupations ranging from an early Plains-type preceramic unit with McKean and other lanceolate points to items representing the historic contact period.

Mayer-Oakes, William J.

Complex Society Archaeology

Several currents of anthropological specialization historically important for the development of a modern approach to the study of ancient complex societies are: Taylor's "conjunctive approach," developmentalism, settlement pattern studies, human ecology, and urbanization studies. A study of field work in the Valley of Mexico indicates the nature of sampling and the typological and basic theory problems encountered in studying complex societies. This review implies the need for a new kind of basic field-observational approach specifically oriented to a theory of ancient social structure, utilizing techniques of intra-disciplinary team research.

McKusick, Marshall

Recent Developments in Iowa Archaeology

Most contributions have been substantive rather than chronological or methodological. Examples of substantive research include recent investigations of Archaic complexes in western Iowa and detailed pottery studies of later cultures. Chronological studies have lagged; the time boundaries of major cultural divisions remain in doubt. Methodological studies are represented by recent work in paleo-environmental change and the reconstruction of ecology from soil analysis. Because differential soil weathering is a function of time, it now seems possible to work out a relative chronology of burial mounds on this basis.

Meighan, Clement W.

Ceramic Sequences in Western Mexico

Since 1956 evidence for sequent periods of occupation has been recovered in Nayarit, Jalisco, and Colima. A later period characterized by relatively abundant copper and elaborate engraved and polychrome ceramics contains Plumbate sherds and Mazapan type figurines. An earlier period should equate with Classic and earlier horizons in central Mexico. Ceramics tend to be simpler, and include zoned-incised types, red-on-buff, and few polychromes. Figurines are "archaic" in appearance; metal is absent. The break between the two traditions is marked in Nayarit and suggests a new population entering the region. Jalisco and Colima appear to have more cultural continuity between the periods.

Mulloy, William

Stone Circles in the Northwest Plains and their Significance

Evidence from excavations indicates that the stone circles often interpreted as recent or late prehistoric "tipi rings" served various purposes during several time periods throughout 7000 years. Stone rings were used for securing tipi covers, for supporting war lodges, brush wickiups, and structures of poles and logs, as well as for defensive and ceremonial purposes. It seems wise to avoid premature generalization about stone circles and to consider each site separately.

Nicholson, Henry B.

Archaeological Ethnohistorical Investigations in West Mexico

Archaeological investigations on the coast between the Rio Grande de Santiago and the Rio Balsas have involved survey of many sites and excavation in key sites. Preliminary regional ceramic traditions have been defined, but time depth still appears to be shallow relative to other Mesoamerican sequences. Ethnohistoric studies show that the Contact cultures, though always somewhat peripheral, were clearly of basic Mesoamerican affiliation.

Olson, Alan P.

The Cross Canyon Group, Eastern Arizona

Salvage excavations in several sites near Ganado, where the economic potential of the Kinlichee Wash and the Defiance Plateau supported a large aboriginal population, clearly demonstrate a classic Southwestern architectural sequence and changes in settlement pattern. Pit houses, small pueblos, a great pueblo, and both small and great kivas were excavated. Analysis of this 500-year local sequence of development allows inferences frequently unavailable to the archaeologist.

Pearson, Richard

Two Traditions in Northeastern North America

Current efforts at synthesis in several northeastern areas stress the unity of the region at all time levels. As a result of the analysis of excavated materials in the Canadian Maritime Provinces, it seems appropriate to distinguish the Eastern Sub-arctic and Atlantic Littoral from the interior developments in Ontario and New York. Several hypotheses for testing the validity of this distinction are proposed. Tentative conclusions about cultural traditions and regional chronology in the Maritime Provinces are offered.

Pendergast, David M.

Prehispanic Metal Working in West Mexico

The comparatively wide range of metal artifacts recovered from West Mexican sites supports the ascription of importance to West Mexico as a source for diffusion in Mesoamerica. These data are considered in terms of a classification developed to facilitate analysis and comparison of Mesoamerican metal artifacts. The patterns that emerge highlight the importance both of metallurgy in West Mexico and of West Mexico as a center of Mesoamerican cultural development.

Pohorecky, Zennon S.

A Brief Report of Three Seasons of Archaeological
Work in the South Saskatchewan Reservoir

In an archaeological survey of the south Saskatchewan Reservoir, more than 225 sites have been recorded. Intensive aerial photo research and actual aerial reconnaissance supplemented the efforts of ground survey crews. Several excavations were undertaken: two protohistoric cairn burials, a Besant-horizon site at the mouth of Coteau Creek, an Early Man site near the mouth of the Swift Current Creek, a series of sites at the Aiktow Creek district with surface indications of sequence of five cultural components dating back 4000 years, and an immense Buffalo Shrine.

Ritchie, William A.

A Radiocarbon Framework for the Prehistory of the
Eastern United States

The significance of radiocarbon dates in Eastern United States is reappraised with regard to problems of chronology, cultural development, and diffusion, and with particular attention to the appearance of ceramics, mortuary ritualism, agriculture, and changes in social structure.

Rohn, Arthur H.

Prehistoric Water and Soil Conservation on Chapin
Mesa, Mesa Verde National Park, during Pueblo III

Archaeological survey reveals three major kinds of water and soil conservation devices. Low walls across intermittent drainages or on hillsides formed terraces of tillable soil, larger dams at canyon heads stored water for domestic use, and a mesa-top reservoir provided water for a cluster of villages. The feeder ditch of this reservoir was later extended. These adaptations to an undependable environment may be symptomatic of the underlying causes for the ultimate abandonment of the Mesa Verde.

Rouse, Irving and J. M. Cruxent

Recent Radiocarbon Dates for the Caribbean Area

The circumstances, validity, and significance of the following dates are discussed: (1) about 15,000 B.C. for the El Jobo complex, Venezuela; (2) 3410 B.C. for the Cerro Iguanas site, Venezuela; (3) 2670 B.C. (?) for the Rancho Peludo culture, Venezuela; (4) 240 B.C. for the Brook site, Antigua. Each date is based upon at least two radiocarbon analyses by the Humble and Yale laboratories. If these dates are valid, they indicate that the time depth of the Caribbean chronology has been underestimated. Dates (1) and (3) appear to be the earliest in the New World for projectile points and pottery respectively, while (3) and (4) suggest that Meso-Indian (Archaic) and Neo-Indian migrations into the Antilles may have taken place earlier than previously estimated.

Schroeder, Albert H.

Hohokam Extensions and Influence to the North

Limited trade with such northern areas as the middle Verde and Forestdale valleys took place during the Pioneer period, although there appears to have been no Hohokam colonization north of the Gila River drainage. In the Colonial period Hohokam colonies were established in the lower Tonto Basin and in Ranch Creek Valley. During the Sedentary period Hohokam colonies sprang up in the middle Verde Valley and as far north as Flagstaff, but they were of short duration. Little influence from south to north is evident during the Classic period.

Schwartz, Douglas W.

A Synthesis of Grand Canyon National Park Archaeology

Although many specific areas of Grand Canyon National Park are still unknown, enough work has been done to draw up some working hypotheses concerning the following: the original peopling of the region, the later sources of population,

the direction of cultural influences, the dynamics of population change, and the relationship of prehistoric and historic groups in the region. Parts of the area were occupied by at least four distinct cultural groups: Pueblo, Havasupai, Paiute, and Navaho. The interrelationships of these groups and their differential reactions to the wide range of environments in the Park are discussed.

Shutler, Richard, Jr.

Problem of the Conflicting Radiocarbon Dates for the Archaeology and Geology of the Lake Lahontan and Lake Bonneville Basins

Radiocarbon dates from cave sites in Nevada and Utah are in conflict with the dates for the stands of Lakes Lahontan and Bonneville. Both series of dates cannot be correct, for if they were, the caves would have been under water at the time of human occupation. Several alternative explanations have been advanced without conclusive result. The archaeological dates do appear to be correct. The most constructive approach to solving the problem is a carefully controlled program of dating tufas, with particular attention to elevations, types of tufa and thickness of the tufa samples.

Simpson, Ruth D.

Projectile Point Typology Project in Owens Valley

Collectors and professional archaeologists in Owens Valley, California have joined forces in an effort to develop a system of standardized artifact typology. Projectile points were selected as the first classification to be considered; 9000 points were made available. Twenty groups with numerous subgroups have been segregated thus far. Examination of points will be virtually completed in June; laboratory analysis and statistical interpretations will follow. The Owens Valley project has been coordinated with the Idaho State Museum program of studying region typologies of projectile points.

Smith, Carlyle S.

Ceramic Stratigraphy at the Stricker Site, South
Dakota

Excavations at the Stricker site in Big Bend Reservoir on the Missouri River revealed two superimposed cultural levels. The upper level is marked by an extensive village site composed of circular earth lodges. The houses and artifacts are identifiable as part of the Coalescent Tradition. The lower level of burned stones and refuse is identified on the basis of the pottery as part of the Middle Missouri Tradition. The stratigraphy clearly demonstrates the sequential order of the two traditions in the Big Bend Reservoir, and places the Iona and Talking Crow wares later than the pottery of the Over focus.

Smith, Watson, Richard B. Woodbury and Nathalie F. S.
Woodbury

Hawikuh: Resurrection of a Ruin

From 1917 through 1923 Frederick Webb Hodge excavated the Zuni ruin of Hawikuh for the Museum of the American Indian. By 1961 several happy accidents brought together the previously separated room and burial records, manuscript material, pottery design drawings, photographs, and maps and plans of the expedition, as well as recent identification of the vessels. These data are now being edited and will be published by the Museum in Hodge's name. Pueblo IV-V architectural practices and burial customs, the architecture of the Franciscan church and monastery, and Zuni ceramic development are emphasized.

Solecki, Ralph S.

New Early Man Evidence in Northeastern Alaska, 1961

The hypothesis that a major Early Man route to the New World went across the unglaciated northern front of the Brooks Range in the Arctic has been substantiated by a Columbia University team of three archaeologists and one

geologist which investigated the unglaciated area in northeastern Alaska which is pinched between the mountains and the ocean. Surveys of the area of the Shubelik-Sadlerochit Mountains north of and around Lake Peters and Schrader, and of the Franklin Bluffs region on the Sagavanirktok River produced 15 sites. The most important was an Early Man site of British Mountain affinities which links with MacNeish's findings on the Firth River in Canada. Four sites are assigned to the Arctic Small Tool tradition; the remainder are Eskimo or of indeterminate ages. Most of the material was surface collected; some limited test excavations were made.

Stephenson, Robert L.

Administrative Problems of the River Basin Surveys

A review of the 16-year experience of the River Basin Surveys highlights the separate but interdependent relationship between research and administration. The major problem areas discussed are: finances and the fiscal year; personnel; supply and equipment; geographic and logistic factors; selection of sites and planning of field activities; processing of specimens, preparation of reports, and publication.

Taylor, Dee C.

Archaeological Investigations at the Elkhorn Ranch Site

In Theodore Roosevelt National Memorial Park one major attraction could be the site of Roosevelt's Elkhorn Ranch. By 1956 National Park Service historians had identified a clearing along the west bank of the Little Missouri River as the place where the cabin had stood, although none of the former ranch buildings remained intact. This paper reports a successful archaeological attempt to locate and map the structures. If future development of the site should be planned, it is now possible to reconstruct the house and outbuildings.

Taylor, William E., Jr.

Hypotheses on the Origin of Canadian Thule Culture

Recently, J. A. Ford offered a revision of the traditional view of the origin of Canadian Thule. He suggested that it was not derived directly from Birnirk, but that the eastern Thule migrations were contemporary with the period following Birnirk-Nunagiak. Revised hypotheses based on data generally unavailable to Ford state that: (a) by A.D. 900 Birnirk existed as far east as Amundsen Gulf; (b) a Nunagiak-like stage was carried to Victoria Island; (c) the Birnirk-Nunagiak development occurred generally along these coasts; (d) a proto-Thule stage existed about 900-1100 between Birnirk and Nunagiak; (e) this proto-Thule, developing into Canadian Thule in transit, spread across the eastern Arctic entering Greenland about 1100.

Taylor, Walter W.

Some Ideas on the Training of Archaeologists

The archaeologist, as historian or anthropologist, lives or dies according to the breadth and depth of his imagination and his ability to control that imagination through logical and empirical criticism. Therefore, the archaeologist requires training which will provide thorough familiarity with logical precepts, a faculty for self-analysis and self-criticism, and a vast store of ethnographic fact for the purpose of providing analogical support or refutation for archaeological inferences. Some suggestions are made as to specific procedures for the indoctrination of pre-professional archaeologists along the proposed lines of logic, self-criticism, and ethnographic knowledge.

VanStone, James W.

Thule Affinities in Recent Netsilik Eskimo Culture

The comparison of an archaeological collection of recent Netsilik Eskimo material from Somerset Island and Boothia

Peninsula, Northwest Territories, with the preceding Thule culture revives the question, first raised by Mathiassen, of relationship between Thule culture and modern central Eskimo culture. Of a total of 53 Netsilik Eskimo artifact types, 39 show a close relationship to eastern Thule forms, while only 14 are distinctively Netsilik. It appears that the Thule heritage persists in the tool inventory of the modern central Eskimo to a much greater extent than was previously believed.

Wasley, William W.

The Hohokam Culture

The Hohokam culture is defined in terms of the objective data of the cultural matrix, the associated trait complexes, geographic identity, cultural differentiation, internal chronology, historical relationships, and comparative chronology, and culture-historical interpretation. The conclusion reached is that the concept of Hohokam as it was set forth in the 1930's best fits all of the available data.

Wedel, Waldo R.

The High Plains and their Utilization by the Indian

This paper re-examines the thesis, still persisting in some quarters, that limited surface water supplies, scarcity of through-flowing streams, a generally harsh environment, and shortage of wood for tipi poles, stakes, and fuel, because they precluded year-round occupation of the High Plains, would also have made regular seasonal occupation and through travel difficult. From a review of the natural resources, notably the distribution and nature of water supplies, it is suggested that seasonal occupation patterns were entirely feasible for pre-horse Indians, and that travel in and through the region, except in time of severe drought or winter storms, would have been practicable for experienced plainsmen, even on foot.

Wendorf, Fred

Archaeology and Private Enterprise: A Need for
Action

Although considerable success has been achieved in the development of salvage programs for federal and state dam, reservoir, and highway construction projects, little has been done to recover evidence rapidly being destroyed by privately-financed construction activities. Some salvage work has been sponsored by private concerns, but only in cases where public land has been involved. However, workable contract procedures for the administration of such salvage operations have already been developed. A four-part program to extend the coverage of salvage projects to areas now neglected is proposed.

Wheeler, Richard P.

The Angostura Complex

The term Angostura complex designates two assemblages of stone implements and refuse materials, associated with hearths and workshops, unearthed in 1948-50 at the Ray Long site in the Angostura Reservoir area, southwestern South Dakota, and dated by radiocarbon analyses of charcoal at 7430 B.C. (component C) and 5766 B.C. and 5123 B.C. (component B). Typological and technological comparisons indicate that the complex may be genetically related to the Agate Basin and Brewster sites in eastern Wyoming and to the older (?) Frontier complex at the Allen site in south-central Nebraska.

Wolper, Ruth G.

Archaeological Factors Contributing to Columbus'
Landfall, 1492

Archaeological survey and excavation involving 20 sites on San Salvador Island, Bahamas, add new facts of historical importance to Columbus' Journal, and to his descriptions

of the Indians he saw October 12-14, 1492. A wide variety of red pottery, including bowls and cassava griddles, occurs in all village, cave, and field sites. Artifacts from prehistoric times can be linked with part of present-day culture. This continuity casts doubt on the statement that all Indians on these islands became extinct during the 16th century.

Woodbury, Richard B. and John Q. Ressler

Effects of Environmental and Cultural Limitations
upon Hohokam Agriculture

Hohokam agriculture existed within a set of environmentally and culturally defined limits. Environmental limits include nature and qualities of the soil, climate, and types of plants cultivated. Cultural limits consist of ways in which the Hohokam were able to modify their surroundings to make agriculture feasible and factors in their culture which would dictate making modifications to the environment. Examination of these limiting factors and their effects on cultivation systems provides a clearer picture of Hohokam agriculture than can be gained through archaeological inference alone.

Wright, James V.

The Ontario Iroquois Tradition

There are three developmental stages in the Ontario Iroquois tradition. Early Ontario Iroquois represented the converging stage of the tradition, when the Glen Meyer branch in southwestern Ontario and the Pickering branch in southeastern Ontario developed in relative isolation. The Middle Ontario Iroquois stage saw the fusion of the Glen Meyer and Pickering complexes to form a horizon covering most of southern Ontario. The Late Ontario Iroquois stage involves the divergence of the Huron-Petun, Neutral, and Erie tribal groups.