Cover Illustration:
The eastern end of the Egyptian Gallery, with the mummies of Meresamon (left) and Petosiris (right) in the foreground and the winged bull from the palace of Sargon II at Khorsabad in the background. Photograph by John Broughton.

Title Page Illustration:
Drawing of the tympanum over the main entrance to the Oriental Institute. The personification of the East (represented by an Egyptian scribe, left) gives a wall fragment from the temple of the Fifth Dynasty king, Sahure, to the personification of the West. This gift is meant to represent the Eastern origins of the Western writing system. Behind each of the central figures are symbols of Eastern and Western civilization. Sculptor: Ulric H. Ellerhusen. Tympanum designed by James Henry Breasted.

The pages that divide the sections of this year’s Annual Report feature illustrations of Oriental Institute Projects.

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INTRODUCTION
Overleaf. Winged genius relief flanking the right-hand side of the outer portal of citadel gate A. Khorsabad, Iraq. 1933/34
INTRODUCTION
William M. Sumner

We will celebrate the Oriental Institute’s seventy-fifth anniversary next year beginning with a gala dinner dance, to benefit the Legacy Campaign, on October 7, 1994. The celebration will end in the spring of 1995 with a festive evening for faculty, staff, volunteers, and members. Anniversaries are always occasions for reflection on past achievements, evaluation of current activities, and planning for the future.

The mission of the Oriental Institute, within its setting as part of the University of Chicago, is to engage in research on all aspects of ancient Near Eastern civilizations, participate in advanced teaching, and maintain the Oriental Institute Museum and associated educational outreach programs. Scholarly publication is one way to measure the past success of our research efforts. Since the Institute was founded by James Henry Breasted in 1919 more than three hundred books have been published under our imprint. These publications are widely acclaimed as fundamental contributions to scholarship in a variety of disciplines—archaeology, history, and philology, to mention only the broadest categories.

Another way of viewing the research accomplishments of the Institute grows out of Breasted’s early recognition that some academic research projects, well beyond the capacity of individual scholars, require long-term institutional commitment. There are many examples of publication and field projects at the Institute that have lasted for well over a decade, but two notable examples that are still active—the Chicago Assyrian Dictionary and the Epigraphic Survey—have been in existence for many decades and are the best examples of long-term institutional commitment.

The historical development of the Chicago Assyrian Dictionary began with a long phase, lasting from 1921 until about 1953, devoted mainly to the production of dictionary cards that represented, with some exceptions, every occurrence of each word. By 1936 there were over one million cards in the dictionary file and perhaps another five hundred thousand entries, in a somewhat revised system, were added by 1953. The task of preparing new dictionary cards continues as new texts are published, but beginning in 1953 emphasis was shifted to the task of writing the dictionary articles and publishing the planned twenty-one volumes—several in multiple parts. The first volume (Volume 6, Ḥ) appeared in 1956 and the second part of the sixteenth volume (Volume 17, Ș, in three parts) appeared this year. This leaves one volume in press and four volumes to be completed; we estimate that these five volumes, plus a final volume of additions and corrections, will be in print by 2004.

The Epigraphic Survey at Luxor, Egypt, informally known as Chicago House, was founded in 1924. The objective of the Survey is to accurately record in precise detail the inscriptions and reliefs on temples and other Egyptian monuments. The “Chicago House Method” was invented by Breasted in 1905 and refined by the
Chicago House staff in the early years of the Survey. The method is an exacting procedure for collating drawings created directly on enlarged photographs through the close collaboration of Egyptologists, photographers, and artists. The first publication of the Survey, which appeared in 1930, has been followed by fourteen additional volumes or portfolios recording reliefs and inscriptions at Karnak, Medinet Habu, and the Theban Necropolis. The first of two projected portfolios recording scenes in the Processional Colonnade at Luxor Temple, based on work initiated in 1973, went to press this year and will appear in the autumn of 1994.

Both the Chicago Assyrian Dictionary and the Epigraphic Survey are outstanding examples of major projects that have required an exceptionally strong commitment of both human and fiscal resources over a prolonged period of time. These and many other projects, together with the research of individual scholars at the Institute, have produced valuable contributions to the field of ancient studies. We can take justified pride in these accomplishments, which have gained international recognition for the Institute and the University of Chicago.

The recent accomplishments and the current status of research, educational, and other activities at the Institute are described in some detail in the following sections of this report. Throughout the report you will find indications of new initiatives and new directions—increased collaboration with other departments in the University of Chicago, experiments with new analytical instruments, and a variety of developments in computerized analysis, model building, and publication.

The history of the Oriental Institute during the past seventy-five years shows that we have honorably fulfilled our mission and established a secure foundation for the challenges of the future. These challenges have many facets related to research and scholarship, graduate education, and public outreach. However, our most pressing and immediate challenge is preservation of our irreplaceable collection of ancient Near Eastern art and artifacts. The museum climate control, renovation, and expansion project is absolutely essential to the future of the Institute. As things stand now we will enter the final phase of architectural and engineering planning (design development and construction documentation) early in 1995; this phase will take about thirteen months.

The next decision point will be the closing of the museum, now scheduled for July 1, 1995, subject to administrative approval. The final step will be to break ground, which can occur no earlier than winter 1996. It is of extreme importance for everyone to understand that museum closing and breaking ground are both entirely dependent on the success of our fundraising drive, the Legacy Campaign, to finance this project. We must demonstrate our capacity to fund the entire $10.1 million cost of the project before the Trustees will authorize us to begin construction. At present we have $4.4 million in gifts, pledges, and bequests, including a grant of $900,000 from the National Heritage Preservation Program of the National Endowment for the Humanities. A more complete account of the Legacy Campaign and the Honor Roll of Donors will be found in the last section of this report. Early in autumn 1994 each member of the Institute will receive a copy of the Legacy Campaign brochure; I know that we can rely on each of you to pledge your generous support to campaign. Together we can assure a bright future for the Institute in the next century, a future that will fulfill the vision first articulated by James Henry Breasted when the Institute was founded.
Overleaf. Xerxes gate. Visitor Hukie Seymour stands under the gate bull. Persepolis, Iran. 1935

The Oriental Institute
AQABA
Donald Whitcomb

The 1993 season of excavations in the early Islamic site of Ayla marked the beginning of a second phase of research on this important site. This was also the season in which we discovered not only more gold coins (Fatimid dinars) but also, and far more importantly, the Congregational Mosque of the city. This is only the latest development in the long history of involvement by the Oriental Institute with Islamic archaeology; it is fitting that on the seventy-fifth anniversary of the Oriental Institute, some reminiscence on that history may be offered in the context of the Aqaba project.

Islamic Archaeology at the Oriental Institute

The Oriental Institute's first and probably most important excavation of an Islamic site was at the great city of Istakhr in southern Iran. Istakhr was an outgrowth of the Persepolis project, initiated by Dr. Ernst Herzfeld in 1931 and continued by Dr. Erich Schmidt during 1935–1938. Both Herzfeld and Schmidt had excavated Islamic cities: Herzfeld had carried out the pivotal work at Samarra in Iraq and Schmidt had recorded the Islamic levels for the Oriental Institute at Alishar Höyük in Turkey in 1927. Schmidt brought an airplane to Istakhr and careful examination of his aerial photographs revealed the underlying structure of the Sasanian and early Islamic cities; recognition of the juxtaposition of those two cities laid the conceptual framework for the Aqaba project.

A typical scene of the Istakhr excavations in southern Iran in the 1930s
Professor P. P. Delougaz excavated Khirbat al-Karak, a site better known today as Beit Yerak, one of the most important Bronze Age sites in the Levant. The first concession of the Oriental Institute during 1952–1953 focused on the Byzantine church, where Delougaz carefully recovered the extensive Abbasid occupation in the ninth century, long after the church had gone out of use. His work established a model of detailed ceramic publication, setting an admirable standard for subsequent work in Islamic archaeology. The Aqaba excavations have attempted to follow this model with extensive publication of primary data, especially the ceramic evidence upon which most historical interpretation is based.

It was the research of Dr. Robert McC. Adams that introduced modern approaches for Islamic archaeology. As director of the Oriental Institute, he supported the Nubian salvage campaigns and the excavations at Fustat, early Islamic Cairo, but the major step was his inclusion of Islamic sites and history in his famous surveys in southern Iraq. Adams has also conducted two excavations studying the Sasanian/early Islamic transition: one at the small site of Abu Sarifa in Iraq and the other at the great city of Jundishapur in southwestern Iran. A similar focal interest in the pre-Islamic development into early Islamic civilization was also instrumental in the decision to excavate at Aqaba.

The author and Professor Janet Johnson initiated the excavations at Quseir al-Qadim on the Egyptian coast of the Red Sea in order to study long-distance trade. This innovative project certainly did not conform to traditional expectations for an Egyptological excavation; it was outside the Nile valley and had neither tombs nor temples, as well as being decidedly post-Pharaonic. Quseir was a study in contradictions—a fishing village with Chinese porcelain, a sheikh’s house with imported dyed Indian cloth, and hundreds of letters written on paper, giving details of the Indian Ocean trade. One unusual aspect is preservation of botanical remains, including many foods imported from the Indian Ocean area in the thirteenth century and from the Mediterranean in the fourteenth century. Work at Quseir was fol-
ollowed by the medieval Luxor project, in which trenches were placed in the last remnant of the habitation mound around Luxor temple. The principal result was a complete stratigraphic sequence from the fourteenth century back through early Islamic, Coptic, and Roman to late dynastic Egyptian times. This sequence provides a basis for understanding the Egyptian component at Quseir and the foundation for further work in the Nile valley.

The excavations at Aqaba in Jordan expanded interest in the Islamic history and archaeology of the Red Sea region. Indeed, if Breasted had turned his attention to Aqaba in the 1930s, the nearby sites of the Iron Age or Nabataean/Roman periods would have been investigated. Prior to 1986, the Islamic city was entirely lost—literally hidden in the sands—and almost nothing was known about the details of its history, let alone its size, architecture, details of daily life, etc. Today the situation is significantly different; we now have a vast array of information on commerce, urban life, historical trends, and a multitude of other aspects.

In general, the results of this research continue the traditional concerns of the Oriental Institute. The contemporary people of Aqaba (and indeed all of Jordan) have physical evidence of their past. On a local level, this has an incalculable psychological effect on the formation of identity. More broadly, there has been much talk recently of the social and political uses of archaeology in modern nations: examples of Islamic archaeology have important impact in rectifying many historical misconceptions. Finally, one may see a small incremental value of this research toward understanding of the role of Islamic culture in the formation of mankind and the modern world. And, of course, there is the pure pleasure of discovery.

One of the most enduring ideas of Breasted is the concept of the “Fertile Crescent,” and Aqaba lies at a pivotal juncture along this zone of incipient civilization. The site of Aqaba has made major contributions toward understanding the formative period of Islamic civilization in the seventh century. The city plan and artifacts testify to the gradual transformation from late Byzantine into early Islamic styles. This parallels the emergence of Islamic political and cultural identity in the time of the first caliphs and the Umayyad dynasty. This is the beginning of a new age and not the end of antiquity. The emergence of Islamic civilization is no clearer than the emergence of the Sumerians or the Egyptian Old Kingdom and, like these predecessors, demands the attentions of archaeological research. Breasted would surely have approved of such a challenge had it been formulated in the 1930s.

1993 Season at Aqaba

As mentioned above, the work in the fall of 1993 marked the first season of the second phase of research at Aqaba. The excavations returned to the northeastern quadrant that is hypothesized to contain important elements of the religious-ad-
ministrative structure of the early Islamic city. These include the Abbasid-Fatimid structures (mid-eighth to mid-eleventh centuries) identified in previous excavations (the Large Enclosure) and the earlier Rashidun and Umayyad structures (mid-seventh to mid-eighth centuries), rare and important evidence of the beginnings of Islamic culture. The one public building excavated in previous seasons was the Central Pavilion Building; this has been hypothesized as a central administrative complex, perhaps an early Islamic governor’s residence. It followed that the Congregational Mosque of the city should be nearby.

The Congregational Mosque

To the northeast of the Central Pavilion was an enigmatic structure called the Large Enclosure, also first identified in 1987 (see site plan). This is the largest building revealed on the site and a preliminary hypothesis suggested a rebuilding during phase B (750–850 A.D.), which encroached over the axial street (Sh. al-Sham; Syria Street). This was suggested to be an enlargement of the Congregational Mosque (built by Uthman ibn Affan about 650) after the earthquake of 748.

The excavations revealed a large building with a complex history. The overall size is twenty-eight meters by about fifty meters, most of which is a large court with multiple gravel floors and no artifactual debris. Around the edge of the court was a peristyle of columns set on plastered piers. These foundations were as much...
as three and a half meters deep in the western part of the building, that is, where the street originally was situated. Foundations were not as deep in the eastern part, where the piers utilized earlier walls. The gravel floors may be dated as late as the tenth century (based on six dinars of the Fatimid al-Aziz) and as early as the beginning of the Abbasid period (ca. 750). All artifacts beneath these floors and associated both with the earliest walls and fill above the street are very early Umayyad and late Byzantine in date. The ceramics are consistent for more than three meters to the water table; the majority are identical to types recovered from the kilns (see below). They belong to phase A (650–750 A.D.) and probably mostly from the first half of that time.

The identification of the earliest walls needs more study, due to extensive fragmentation and destruction of the building’s eastern portion in the wadi. The identification of the Large Enclosure is problematic; it will be useful to list its attributes:

1. The building had at least three entrances, approached by platform stairways.

2. In the northern corner was a square structure that might have served as a tower.

3. The peristyle of columns has an additional row on the southern side forming a covered area of two riwaqs.

4. There is one niche in the southern wall, with a platform in front and a semi-circular buttress attached to the exterior. This feature is very similar to known forms of mihrabs.

The above features of this building are consistent with a mosque of Syrian type in early Islamic times. The size is also within the common range for urban mosques. There is, however, a major problem with this identification; the orientation of the qibla wall is to the southwest, while the orientation of common qibla in Syria is due south. One might argue that the southwest is the direction of the Red Sea coasts and might have been sanctioned by local tradition in the original foundation of the

General view of the site from the northwest
city. Thus this mosque both conforms to the general type and yet reveals individual characteristics that could not have been predicted. This mosque presents a first step in understanding factual details of the origins of Islamic culture.

The Seventh Century Kilns

A second result of the 1993 season was the excavation of two kilns located to the northwest of the site of Ayla. These kilns were reported in 1987 and described as part of the West Aqaba Survey, in which they were hypothesized to represent industrial production of amphoras in the early seventh century. The excavation of these kilns was conducted by Dr. Khairieh Amr and Ms. Ansam Malkawi.

Two kilns were partially uncovered; the larger was more than three meters in diameter and more than two meters in preserved height to the firing floor. The second kiln was only slightly smaller with the firing floor completely preserved; the firing chamber was entered and the complete construction technique revealed. The ceramic products seem to have focused on amphoras, a type distinctive to the seventh century, as well as cooking pots and other common forms. The extent of this ceramic industry and evidence from early levels of the site of Ayla suggest a vital increase in occupation and commerce during the early Islamic period.

A report on the kiln excavation, “The Excavation of Two Seventh Century Pottery Kilns at Aqaba,” has been written for the Annual of the Department of Antiquities of Jordan under the joint authorship of Ansam, Khairieh, and the present writer.

The kilns clearly illustrate the beginnings of industrial production in the early Islamic period. The principal product was amphoras necessary for transshipment of Syrian merchandise into the Hijaz and Red Sea. In testimony to this trade, Aqaba amphoras have been found in southern Yemen and in Ethiopia (at Axum; not accidentally, the Ayla excavations have produced two late Axumite coins). The evidence of the kilns coincides with the foundation of the new port of Ayla, and both form pieces to the puzzle of the development of early Islamic culture. It is an investigation which would have enthralled Breasted, had he not left off the story in the middle, what we call the medieval. He left us a vast field, a direction to continue the beginnings embodied in the Oriental Institute.
With Much Appreciation

The fall season of excavations at the site of early Islamic Ayla lasted from November 1 through December 26, a total of forty-five digging days. The staff consisted of five foreign archaeologists and four Jordanian students. The expedition benefited from the representation of Ms. Sausan Fakhery and Dr. Khairyeh Amr, on behalf of the Department of Antiquities. This has been possible only with the enthusiastic assistance of Dr. Safwan Tell, Director General of Antiquities. Logistical support was due to the special attentions of Drs. Pierre and Patricia Bikai of the American Center of Oriental Research, who managed the complexities of a USAID grant for archaeological research at Aqaba. Logistics in Aqaba benefited from the assistance of Ms. Sausan Fakhery and Mr. Mohammed Freihat of the Aqaba office of the Department of Antiquities; these two individuals not only helped with daily affairs but also proved to be energetic and talented excavators.
THE ARCHAEOLOGICAL LANDSCAPE OF THE BALIKH VALLEY, SYRIA

Tony Wilkinson

My interest in the development of landscape and settlement in northern Syria is intended to build upon earlier field results from the region described in the 1992–1993 Annual Report. In order to get an extensive view of the terrain, fieldwork has been focused upon two areas within the western part of the Syrian Jazira (fig. 1): The upper part of Lake Tabqa, specifically the area of Tell es-Sweyhat (see report by Thomas Holland in the Annual Report for 1992–1993); and the Balikh valley. During 1993 fieldwork was confined to the Balikh valley, specifically focused on the Neolithic, Halaf, and Middle Assyrian site of Sabi Abyad. Excavations at this site, directed by Peter M. M. G. Akkermans of the National Museum, Netherlands, continue to provide abundant information concerning prehistoric communities in northern Syria, and with the discovery of numerous Middle Assyrian tablets within a fortified building complex, the site is now also shedding light upon living conditions close to the western limits of the Middle Assyrian empire. The Chicago field season was again funded by the National Geographic Society and the Oriental Institute, and we are grateful to Peter Akkermans for continued logistical support as well as to the Directorate General of the Department of Antiquities, Syria,

Figure 1. Location of Lake Tabqa (area A) and the Balikh valley (area B) in northern Syria
for help and encouragement during fieldwork.

During August and September 1993 the writer, with the assistance of Fokke Gerritsen, a graduate student at the Oriental Institute, and members of the Sabi Abyad team, extended recording of the archaeological landscape to the south of the major prehistoric complex of Tell Sawwan/Mounbateh. As a result the coverage now includes the boundary of rain-fed cultivation and extends to the south well into the zone of irrigated agriculture.

A noteworthy discovery of the 1993 field season was a major canal extending from near Tell Sahlan in the north to Tell Hammam et-Turkman in the south (fig. 2). This thirteen to eighteen meter wide depression formed a dark crop mark on aerial photographs and on the ground was evident as a straight, shallow valley running along the western bank of the present Balikh River. A missing stretch about three kilometers in length has probably been eroded away by the river, which appears to have adopted the canal as its bed for part of its course. The weathered, eroded, and discontinuous course of the canal and its spoil banks combined with the presence of Hellenistic occupation on spoil banks near Tell Hammam et-Turkman suggest that the canal is of considerable antiquity and is probably pre-Hellenistic in date. The canal is of more than local interest because its route by Tell Hammam (possibly the Old Babylonian site of Zalpu) suggests that it may be a canal that caused disputes over water allocation during the Old Babylonian period. Thus texts from Mari indicate that by diverting the flow of the Balikh the inhabitants of Zalpu may have caused the inhabitants of Tuttul (Tell Bi‘a on the Euphrates; fig. 1) to complain to the authorities at Mari. This identification of the canal must, however, remain tentative until it is excavated and dated more accurately, which we hope to accomplish in the field season of summer 1994.

A major advantage of studying the entire landscape rather than individual sites or artifacts is that it then becomes possible to view the context within which ancient communities developed and lived. More specifically, the physical environ-
ment of a site can be recorded and it may even be possible to determine how conditions have changed through time. For example, in the Balikh, a shallow valley between Sabi Abyad and Tell Hammam et-Turkman may represent a former course of the river that perhaps originally continued to the south to flow between the prehistoric sites of Tell es-Sawwan and Mounbateh. This may therefore be the remains of the channel that existed before the above-mentioned canal effectively diverted the Balikh River to the western side of the valley. This would explain the present course of the river which in places anonymously cuts through the western bank river terrace and may also explain why a number of prehistoric sites occur along the eastern fringes of the valley far removed from obvious water sources. Again, however, this notion must be tested by further fieldwork.

The landscape survey continued to document ancient “hollow way” routes which remain as straight soil marks and shallow valleys (see my report in last year’s Annual Report). Although most are difficult to date, a long feature located about two and a half kilometers to the west of Tell Hammam et-Turkman (fig. 2) has only Iron Age sites along its route. Surface collection of pottery from a number of these sites, including the (approximately) ten hectare site of Khirbet Ajlan (Site 38, shown in the extreme south of fig. 2), provided good examples of Late Assyrian types, thus suggesting that the route may have formed part of a Late Assyrian road network probably linking the Harran plain and Sultantepe areas with Raqqa to the south on the Euphrates River. Although present data does not allow us to follow this road to the north, it is hoped that fieldwork and aerial photographic mapping in the summer of 1994 will at least enable it and its associated sites to be traced further to the south, thus improving our knowledge of a little known part of the Assyrian empire.

THE EPIGRAPHIC SURVEY

Peter F. Dorman

The 1993–1994 field season, which marked the seventieth year of the Epigraphic Survey, opened on October 15, coinciding with the projected terminal date of the renovation of the Chicago House complex, and ended on April 1. The major achievements this year were the completion of epigraphic work on all remaining areas of the Colonnade Hall in Luxor Temple, bringing to a close many years of field work at that monument, as well as continued progress on the documentation of the small temple of Amun at Medinet Habu.

The summer of 1993 proved to be one of the most eventful periods for the Chicago House renovation (fig. 1), involving in part the expansion and partial conversion of the library building, which is the nerve center of our research and our scholarly resources. To assist in overseeing the work, James Riley and Sue Lezon returned to Luxor for the two brutally hot months of July and August, and I joined them there for ten days for a first-hand look at the construction. Several critical deadlines were met when the concrete slab for the library roof was poured on July...
14 (fig. 2) and the concrete tests for the new guest house proved satisfactory. During this time, new floors were laid throughout the ground floor of the residence as well; the exterior walls of all buildings were stripped of their old plaster and resurfaced with a more durable finish; the walkways and driveways were repaved; and the darkroom was fitted with custom-built stainless sinks, improved lighting and ventilation, and double wired outlets that supply both 110v and 220v power for equipment brought from home or purchased locally. The logistics of making the buildings completely accessible to the contractors, of protecting our furniture and equipment over the summer, and of preparing the new facilities for a returning staff were again left to the incomparable organizing talents of Tina Di Cerbo and Richard Jasnow, and it is largely due to their hard work and coordination that the Survey was able to begin field work in October as scheduled.

Finishing work on the buildings and grounds continued as late as mid-December, however, and even the library building was occupied only in phases. As workmen left an office or studio by one door, bookcases and desks would be moved in through another. Although the artists’ studios were not ready for their occupants until early November, drawing tables were set up in the staff suites so that field work could proceed without delay—a contingency foreseen the previous spring. The library at Chicago House is now housed in two broad halls, with almost double the floor space and shelving of the old. The original hall, built in 1930, has been returned to its original appearance, with only the addition of badly needed fluorescent lights along the perimeter: the hall is again lined with its gray-green metal bookcases that reach up to meet a long-concealed curved molding, and its French ceramic arabesque plaques are clearly visible on the walls. The new hall imitates the architecture of the old, with a ten-meter ceiling (a passive air conditioning measure), towering false arches, and high windows for natural light (fig. 3). Filled with beige metal bookcases to maximize shelf space, the room also holds seven new readers’ tables and is adorned by the original art-deco alcove rescued from the demolition of the old building and carefully reconstructed in its new position. Grading and landscaping of the grounds added the final touch to the renovation, and within a year or two the gardens and climbing vines of Chicago
House should look well established. Eighteen months of construction came to an end in mid-December, remarkably on target for a project with extremely tight scheduling stipulations, which were required in order to minimize interference with ongoing field work during the winter months. The success of the project owes much to the daily supervision of the work by Engineer Ahmed el-Refaei, the site supervisor from Bechtel Egypt who rendered such dedicated service to us, as well the great personal interest taken in the construction by Mr. Ashraf Ghonima, General Manager of Bechtel Egypt, and Mr. Sami Saad, president of the general contracting company.

Field work at Luxor Temple revealed one or two interesting surprises as the last checks were made to the drawings that will be published in a second volume on the Colonnade Hall, incorporating the decoration of the facade of the hall, the great northern portal, the upper registers, the colossal columns, their architraves, and the graffiti and marginal inscriptions. Director's checks were accomplished on all the drawings save one, and a preliminary plate layout and manuscript notes were prepared for Reliefs and Inscriptions at Luxor Temple, Volume 2: The Facade, Portals, Upper Registers, Columns, and Marginalia of the Colonnade Hall. The great bulk of these drawings consisted of the vast offering scenes on the columns (fig. 4), the large graffiti on the facade (see fig. 5; the inscriptions of the High Priests of Amun, Pinodjem and Sheshonk, and the dedicatory relief of Khonsu-Ij were mentioned in last year's report), some sixty-five block fragments, and graffiti from a variety of locations and historical periods. Epigrapher Debbie Darnell also completed her survey of cartouches and a synthesis of all fourteen columns in the hall.

Epigraphers Richard Jasnow and John Darnell worked in particular with artist Ray Johnson on the wooden scaffolding erected against the Colonnade Hall facade, finalizing decisions concerning the traces of the original Eighteenth Dynasty relief still visible there, beneath the later recarving by Ramesses II. Ray also drew up the reconstructions of the missing portions of the great Colonnade facade, floating the pertinent block fragments into place where they were originally located.

Figure 3. Members of the Friends of Chicago House weekend in November 1993 were given a complete tour of the facilities, including the new library hall, seen here.
Together with Ray, artists Tina Di Cerbo and Margaret De Jong penciled and inked the sixty-five facade fragments, which were all collated and approved by the end of the season. It was of considerable interest to discover that the western side of the facade, demolished almost to ground level during the medieval period for the reuse of its stone, displays the same kind of Greek graffiti that is to be found on the better preserved eastern side, and in the same respective place: above the roof line of the Ramesside court, but within convenient reach of visitors whiling away their time by scratching inscriptions into the stone. Perhaps the most intriguing of these Greek graffiti, preserved now only on a fragment of carved relief, reads “a proskynema to the king of the world (kosmos)”; incised across the huge double plumes of Amun-Re, these words probably refer to the god’s common epithet nb pt, “lord of heaven,” and represent an homage to him.

A Coptic graffito, located on the eastern side of the great northern portal and first recorded by the Survey several years ago, has now been recognized to contain an indiction number, a type of chronological reckoning based on fifteen-year cycles beginning in the early fourth century A.D. (fig. 6). Its location is of extreme interest: the inner thickness of the portal in a place where stone has been stripped away for reuse, but very close to the level at which the gradually rising ground level halted the stone robbing. If this inscription can be dated by internal evidence, we will have a very good idea of the time at which the Colonnade Hall ceased to be used as a convenient quarry for local building, possibly during the period between the eighth and the tenth centuries A.D. Two Arabic graffiti may also confirm...
such a date as well, one on the northern portal and the other on one of the column shafts, both located fairly high above present ground level.

With Richard and John, artist Tina Di Cerbo also examined the long western exterior wall of the Colonnade Hall and discovered sixteen hitherto unnoticed graffiti of different periods; these were all recorded and approved for publication. Likewise, a fragment of one of the enormous roofing blocks from the hall was found to contain fifteen graffiti left by various temple priests, several of whom who carved the outlines of their feet or sandals into the sandstone as they stood on the roof, perhaps waiting for the appearance of the processional barks from Karnak during the festival of Opet. A good number of these sandal outlines are filled with personal names, and one (fig. 7) provides the names of the two second priests of Amun-of-Opet, Padihorpakkered and his father, Horsiese, two members of a family known from other inscriptions in the Theban area.

Despite the continuing interest contained in even the more informal texts at Luxor Temple, the primary efforts of the artists were centered at the small temple of Amun at Medinet Habu, where documentation progressed in five of the six painted chapels of Hatshepsut and Thutmose III and on many of the square pillars that surround the bark sanctuary. Artists Susan Osgood, Margaret De Jong, Jay Heidel, and Tina Di Cerbo placed priority on the interior walls, but in case of electrical failure—a fairly common phenomenon on the western bank—they had to remain flexible enough to switch to an exterior column scene whenever they were plunged into the dark. Despite these inconveniences, twenty-six drawings were inked this last year and collations were begun by the epigraphers on many of them; likewise, an additional twenty-seven were penciled at the wall or set aside as summer work for the transfer of corrections. All the epigraphers, including student epigrapher Drew Baumann, devoted much of their time to collations, and even the field director managed to wrest a few hours at the wall from an otherwise distracting schedule.

In the course of last year, a team of conservators of the Egyptian Antiquities Organization, led by the very able Rais Farouk, has been trenching around the foundations of the small temple in an effort to expose the buried
stones and dry them out, subsequently filling the trenches with gravel that will assist in the drying process and minimize the activation of salts caused by contact with fresh ground water. To our surprise, the foundation courses of the Ptolemaic hall directly to the east of the Eighteenth Dynasty temple consist largely of reused blocks, many of which display carved and painted relief of the Kushite Twenty-fifth Dynasty (fig. 8) or from the Ptolemaic period itself. The archaeological reports published in the 1930s by Dr. Uvo Holscher on the small temple make definite but fleeting reference to decorated blocks; the possibilities of full documentation, however, are most suggestive. These newly uncovered stones consist of both raised and sunk relief, that is, they represent both interior and exterior walls, and with photography and careful epigraphy it may well be possible to reconstruct on paper the decoration of the vanished

Figure 6. An abraded indiction inscription, located in the thickness of the northern portal to the Colonnade Hall, may provide a chronological clue to the destruction of the walls

Figure 7. The names of two Second Priests of Amun-of-Opet, Padihorpakhered and his father, Horsiese, are carved within the outlines of sandals on a fragmentary roof block from the Colonnade Hall
Kushite monument that once stood on the present site of the Ptolemaic hall and that was presumably attached to the Kushite pylon, which still stands in situ. To this end, the Survey’s new photographer, Jerry Kobylecky, was sent into the trenches for the unenviable task of taking precise photographs of underground blocks with very little space to maneuver (fig. 9). With the help of archival assistant Ellie Smith, he finished photography on some seventy blocks in the last weeks of the season. Among these are included at least three blocks from a Ptolemaic kiosk gateway that once stood in the vicinity of the small temple, but whose exact location must remain a mystery for now. It may well prove that the recently recovered notebooks of Dr. Hölscher (see Emily Teeter’s report elsewhere in this Annual Report) will supply additional information to answer some of the questions that have been raised during the present season.

We were delighted once again to be able to work with Jean and Helen Jacquet, who, following their season at North Karnak for the French Institute, offered their services at Chicago House for several weeks. The Jacquets completed an elevation drawing of the western wall of the Colonnade Hall that will be used for plotting the new graffiti and, in conjunction with the (re)discovery of the Kushite blocks at Medinet Habu, they began a meticulous architectural survey of the Ptolemaic hall, searching in particular for traces of walls or doorways that may give a clue to the original configuration of the Kushite monument. Together with the reconstructed wall decoration, their new plan will eventually be used to reconsider the development of the small temple of Amun during the Twenty-fifth Dynasty.

It was also a great pleasure to welcome Ann Russmann as a colleague during the months of February and March, expanding the scope of the Survey’s work by her unique insights. As an art historian, Ann’s special expertise in the Kushite period proved invaluable to our deliberations about the small temple, and it was fortunate that her stay at Chicago House coincided with that of the Jacquets. She also spent a good deal of time examining the reliefs of the portico in front of the Kushite pylon, looking for signs of recarving and usurpation that may help to explain the architectural chronology of this later period, in preparation for the epigraphic documentation to come.

Photographers Sue Lezon and Jerry Kobylecky faced the pleasant task of setting up a completely renovated darkroom at the beginning of the season, with all support systems and sinks having been custom designed by Sue during the last two years; the new building indelibly bears her mark. Her departure in November marks ten years’ dedicated service to the Survey, and her absence will be greatly felt at Chicago House, both personally and professionally. Fortunately,

Figure 8. Upside-down yet still serene, a Kushite king gazes from one of the reused blocks in the foundation walls of the Ptolemaic court of the small temple. Epigraphic research may provide new information on the decoration of the now-vanished Kushite monument there.
she continued to work on the *Lost Egypt* portfolios after her return to the United States and mounted a set of historic Chicago House prints for display in the new library. In the course of the season, Jerry kept up with the voracious demands of the artists and epigraphers, producing twenty-two new joined drawing enlargements for the work at Medinet Habu and blueprinting and bleaching as many more for collation. In addition to the field photography at the small temple of Amun, he made supplementary prints for the *Lost Egypt* portfolios, enlargements of the sixty-five facade fragments from the Colonnade Hall for drawing and collation, and at the end of the year undertook the huge task of final photography on all approved documentation from Luxor Temple, involving ninety-one negatives of one hundred seventy-eight individual drawings. Jerry also set up another contact printer from old equipment found in the Chicago House magazines and trained his assistant, Gharib, in its use.

Ellie Smith continued her invaluable work in the photographic archives, her first task being to move the Survey’s entire holdings of negatives and prints into their new storage facilities in the library building. Prints and negatives are now properly housed in separate rooms, with nitrate films kept apart from acetate films; for the first time in decades, photographic materials are filed in logical sequence and under archival conditions. Ellie completed the reorganization and renumbering of almost eight hundred of the glass plate negatives according to site information, and entered six hundred forty-six records on our small-format films onto computer, most of it from the Habachi archives, which is still in the process of identification and registration. Assisting Sue and Jerry in many of their routine tasks, Ellie took an active hand in setting up the field photography at Medinet Habu and keeping careful track of the fragment locations; she also typed out guidelines for darkroom procedures and continued to refine the main archival database.

In addition to her epigrapher’s duties, Debbie Darnell again oversaw the management of the library, with the assistance of Richard, Tina, John, and Drew. The library books, stored in the residence building during the summer, were transferred to their new home by Tina and Richard and their crew of Chicago House workmen in the course of two weeks, but a manufacturing error delayed the delivery of some of the bookcases, necessitating some double-shifting of many volumes in November. Volumes that have long been held in dead storage for lack of space were reintegrated into the shelves, so that all books may now be found in sequential order. Debbie’s efforts in the library were prodigious: 441 book titles were entered into the registry (more than any previous season), included virtually every new title that we received in Luxor. The total now stands at 16,756 items. The accessioning was greatly accelerated by Drew Baumann’s help in stamping and labeling volumes, typing library records, and proofing catalogue cards. Debbie also initiated a separate database for all the library serials, which total over 350, for the purposes...
of standardizing entry criteria, ensuring the completion of series' entries, minimizing accession time, and facilitating the ordering and tracking of new volumes. Since existing series databases have proved unsatisfactory, administrator Paul Bartko devised one using Double Helix that is adapted precisely to these purposes, and which can be converted to another program if desirable. Volunteer (and free-lance editor) Nan Ray typed in entries for no fewer 185 series on this program, a deceptively small figure, since even the Bibliothèque d'étude series of the French Institute contains 105 titles alone. The remainder of the database will be completed next season, at which time all journals and series will be available on line for library users. Debbie also organized the encapsulation in mylar of 29 fragile maps with the help of Ellie and Nan, a project that will continue as time permits.

Paul Bartko again supervised the administrative and logistical functions of the expedition and brought his special interests to bear in the setting up of the computer network that now links the administrative offices with the library, the public-access computers, the photographic archives, the epigraphers' offices, and the artists' studios. The routine management of the house and kitchen was left largely in Paul's very efficient hands for much of the season, and he assisted greatly in coordinating the Friends of Chicago House (FOCH) tour in November, as well. My wife, Kathy, who in the past has taken on these household duties, was resident in Luxor with our daughters, Margaret and Emily, for only two months and was able to ease Paul's responsibilities during December and January.

I am particularly grateful to Richard Jasnow for agreeing to serve as acting field director during my two absences from Chicago House, for three weeks in November and for another three weeks in February. His able management of Survey affairs ensured the continued smooth progress of field work and all house functions. Back at the Oriental Institute, we were very fortunate to have former artist Carol Meyer on hand to manage the Survey office during the field season. She kept us in touch with latest home developments, distributed the winter Bulletin, and coordinated the mailing of needed supplies to us in Luxor.

Carlotta Maher continued as our key person for development activities, and she truly graced our presence at Chicago House for much of the winter. The hundreds of postcards and personal notes that flow from her pen have kept many of our supporters in touch with the Survey's activities, and she was instrumental in the success of our November Friends of Chicago House tour as well as in the organization of the exhibit of the thirty printed images from our Lost Egypt portfolios. The Lost Egypt exhibit opened in September at the Richard Gray Gallery in Chicago to a very large audience, and since then it has opened at the Sony Gallery at the American University of Cairo, the American Cultural Center in Alexandria, and the Central Exchange in Kansas City, Missouri. Nan Ray has rendered outstanding support to many of our fundraising efforts, and I also wish to thank Dr. Emily Teeter for facilitating arrangements for the exhibit during our inconvenient absences in Luxor.

One abiding concern throughout the season was the fact of continuing acts of random violence, most frequently aimed at the Egyptian security police this year, rather than tourists in particular. The number of foreign visitors in Luxor remained very low, and the Chicago House library welcomed only three hundred seventy-three guests (down from a usual high of over a thousand), and we held only three house receptions, including those for the November Friends of Chicago House tour and for the trustees of the American University of Cairo. Only thirty-three library tours were given to groups and to individuals passing through Luxor. Life in town
seemed otherwise normal, however, and those who did arrive in Egypt as tourists enjoyed the most spectacular winter weather in memory. In fact, we managed to entertain twenty-one overnight guests during the five-and-a-half-month season, for a total of one hundred nine guest-nights. The most unexpected guest was surely Ambassador Madeleine Albright, United States Representative to the United Nations, who arrived with just twelve hours notice on the last day of the season for a brief and thoroughly enjoyable tour of Luxor Temple with fifteen of her personal staff.

During the winter and spring, the manuscript was completed for the inaugural volume on Luxor Temple, *Reliefs and Inscriptions at Luxor Temple, Volume I: The Processional Festival of Opet in the Colonnade Hall*. The one hundred thirty plates were printed in June by Hennegan Press of Cincinnati, and the accompanying booklet and portfolio box will be produced this summer. Because of the numerous foldout plates, the volume promises to be the largest ever published by the Survey, weighing in at over twenty-one pounds. Another publication, *The Registry of the Photographic Archives of the Epigraphic Survey*, in production this summer, will mark the formal end of the conservation of the photographic archives at Chicago House, a project made possible thanks to a grant awarded to the Survey in 1989 by the Getty Grant Program of the J. Paul Getty Trust. This catalogue of the main photographic holdings maintained at Chicago House will appear as a printed volume, and the information in it will also be made accessible as a computer file to scholars internationally, to facilitate the kind of database searching that a book does not permit.

The staff this season consisted of the author as field director; Richard Jasnow, John and Deborah Darnell, and Andrew Baumann, epigraphers; W. Raymond Johnson, Christina Di Cerbo, Susan Osgood, James Heidel, and Margaret De Jong, artists; Susan Lezon and Jaroslav Kobylecky, photographers; Edna Russmann, art historian; James Riley, engineering advisor; Jean and Helen Jacquet, field architects; Kathy Dorman and Paul Bartko, house and office administrators; Jill Carlotta Maher, assistant to the director; Elinor Smith, photographic archives assistant; and Saleh Suleiman Shehat, our irreplaceable chief engineer, whose advice and services to the Survey have been inestimable. We were very fortunate, too, that our invaluable friend and resident Egyptologist Dr. Henri Riad was on hand for most of the season, to assist us in the areas of local contacts and liaison; he also continued to administer the Labib Habachi Archives on behalf of the Survey. I wish to express a special debt of gratitude to all the members of the Epigraphic Survey, who were able to carry on the field work in such a professional and dedicated manner, despite the confusion and inconveniences caused by the ongoing renovation of the facilities.

We are especially grateful to the members of the Egyptian Antiquities Organization who contributed directly to the success of the season: Dr. Abd el-Halim Nur ed-Din, Chairman of the Egyptian Antiquities Organization, Dr. Ali Hassan, Supervisor of Antiquities for Upper Egypt; Dr. Mohammed el-Saghir, Chief Inspector of Antiquities for Upper Egypt; Dr. Mohammed Nasr, Chief Inspector of Qurna; Dr. Abd el-Hamid Marouf, Chief Inspector of Karnak and Luxor; and Dr. Madeleine el-Mallah, Director of the Luxor Museum.

In addition to those mentioned for specific contributions, I gratefully express thanks to many other colleagues and friends: the United States Ambassador to Egypt, His Excellency Robert J. Pelletreau, Jr., and Mrs. Pamela Pelletreau;
Edmund Hull, Marjorie Ransom, Gilbert Sherman, and Paul Thorn of the United States Embassy in Cairo; Ashraf and Henny Ghonima; Nadia Mostafa; Mohammed Ozalp; David Maher; Mark Rudkin; Lucia Woods Lindley and Daniel Lindley, Jr.; Louis Byron, Jr.; Terry Walz, Mark Easton, Ibrahim Sadek, and Amira Khattab of the American Research Center in Egypt; Fathi Salib of American Express in Luxor; and Cynthia Echols, Evada Waller, and Florence Bonnick of the Oriental Institute.

Three institutions in particular have rendered fundamental assistance and support that have proved essential to the success of the season: the Amoco Foundation, Inc., The J. Paul Getty Trust, and The Xerox Foundation.

As always, we will be very pleased to welcome members of the Oriental Institute and other friends to Chicago House from October 1 to April 1. Please write to us in advance, to let us know the dates of your visit, and call us as soon as you arrive in Luxor, so that we can confirm a time for a library tour that is mutually convenient. Our address in Egypt: Chicago House, Corniche el-Nil, Luxor, Arab Republic of Egypt; the telephone number is 372525 (direct dial from the United States: 011-20-95-372525) and the facsimile number is 381620 (011-20-95-381620).

GIZA
Mark Lehner

In the 1991–92 Annual Report I communicated the discovery of two bakeries in our excavation of Area A to the south of the Sphinx. At the risk of augmenting an in-house reputation for being obsessed with ancient Egyptian bread pots, I offer an update on the bakeries of the Pyramid Age that we discovered at Giza. In September–October 1993 National Geographic provided the funds to go to Egypt and to recreate a bakery like those we discovered for experimental baking with ancient methods using emmer, barley, and wheat flour.

Our ancient bakeries were composed of low stone rubble and Nile clay walls with a marl floor in rooms measuring about five and a quarter meters (north to south) by two and a half meters (east to west). In both rooms we found a cache of bell-shaped ceramic pots, long recognized as bread molds in Egyptian archaeology and labeled with the name bedja in the Old Kingdom tomb scenes. The ancient Egyptians began to use bread molds of this type just about the time that the pharaonic state emerged around 2900 B.C. They continued to use them until near the end of the Old Kingdom, about 2200 B.C. While some have suggested that pot-baked bread was for special occasions—festivals, temple offerings, etc.—the Old Kingdom bread mold has been found as a major component of ceramic corpora in sites of all kinds from Egypt’s traditional southern border at Elephantine to First Dynasty outposts in southern Palestine. Egyptians in many different settings desired and produced their pot baked bread.

Old Kingdom tomb scenes show the pots placed rim to rim as a kind of portable oven for baking in open pits. Our bedja pots were unusually large, as much as thirty-
five centimeters in diameter and up to thirty-five centimeters in depth. Put together in the manner of the tomb scenes they would create an interior space seventy centimeters in height. If the dough would swell to fill the entire space, this would produce a huge loaf of bread. Indeed, certain tombs scenes show offering bearers carrying huge conical bread loaves of the shape that would be produced by our pots. As I reported previously, we seem to have found all the essential tools required for the production processes depicted by Old Kingdom scenes and figurines: Both bakeries originally had three large ceramic vats in the northwestern corner, presumably for mixing dough. We further presume that a fireplace in the form of an open platform in the opposite southeastern corner was for stack heating the pots, a preliminary step often illustrated in figurines and wall art. Rows of holes at the bottom of a shallow trench along the eastern wall must have been for holding the dough-filled pots that were covered by another pot placed upside down. Hot coals and embers in the trench provided the heat that baked the bread.

The problem with this scenario is that there is little or no evidence that the ancient Egyptians of the Pyramid Age used bread wheat, *Triticum aestivum*, which is high in gluten, giving the elasticity that allows air pockets to expand during baking to give the crumb its lightness while producing a crispy crust. According to paleobotanical evidence recovered from our site and most ancient Egyptian sites prior to the Ptolemaic period, the Egyptian cereal grains were barley, which has no gluten, and emmer, which has a small amount of gluten. The volume of the bread molds indicates that this must have been a leavened bread, but even so, the lack of gluten would suggest that the large loaves formed in our bread molds would be so heavy as to be almost inedible, much less suitable for festive occasions.

Our problem may relate to a lexical as well as an archaeological issue. Every beginning Egyptologist learns the term *it* for barley, *bdt* for emmer, and *zwt* for "wheat." What are the relationships between the ancient Egyptian and modern scientific categories for grain products? Simply, what is *zwt*? It is possible that, as in certain Mesopotamian agricultural records, bread wheat was only a small percentage of total grain crops, (used, perhaps, as a kind of starter dough?), and that it is less visible in the archaeological record.

With some of these questions in mind we took advantage of Dr. Edward Wood's volunteer services. Ed is a pathologist who has built a business, Sourdoughs International, from his interest in one of the world's oldest cultigens, yeast. The authors of *World Sour Dough Breads of Antiquity*, Ed and his wife Jeane curate a collection of wild and domesticated varieties of yeast that they have "captured" from places as diverse as China, Saudi Arabia, and a bakery in modern downtown Giza. Ed, who contacted me shortly after we found the bakeries in 1991, was intrigued by the possibility—granted remote—that yeast spores from the Pyramid Age could be reactivated the way scientists have revived beer yeast from an early nineteenth century shipwreck. We were both interested in understanding more about Old Kingdom baking. Ed brought to Egypt a supply of both emmer and barley flour that he had irradiated to kill any lingering modern yeast. With a dish of flour and water, Ed successfully enticed and captured wild yeast from the balcony of his room in the Mena House Hotel at the foot of the Great Pyramid (he thought the yeast might have been lurking nearby in date palms).

Our experiment was limited by the schedule of the National Geographic team who were investigating a story on Egypt's Old Kingdom. While certain controls were enforced, we did not have the time required for more than a few repetitions
and modifications of the experiment. We were trying to replicate in the space of two weeks a process that the Egyptians had used for over four hundred years!

Our site was on private land some distance from the foot of the Saqqara Plateau. The top of the Djoser Step Pyramid looked like an upside down bread pot rising over the horizon. I kept our map of the ancient Giza bakeries close at hand as a template. We had gathered sand, mud, water, and broken limestone. It was a bit surprising to see that it took the team—two men with donkeys, five laborers, and two professional builders—about two and a half hours to build the low walls of one bakery. We had spent weeks compulsively mapping walls of the same size and composition. We built a high-fidelity copy, including the contours of the floor, the vat emplacements, the open fireplace, and a canopy supported by posts that corresponded with post holes in the original.

Meanwhile we had to equip ourselves with a set of pots that matched the Old Kingdom bread mold, as well as large vats similar to those we found in situ. We purchased ready-made vats from the pottery market in Old Cairo. These were approximately the same size, but slightly different in form, as the ancient variety. We wanted to be closer to prototype in the bread molds, and for this we went to a potter in the neighborhood called Batn el-Baqara, "Belly of the Cow," where cement, lime, and ceramics are produced. Our potter usually produces wheel-turned vessels of finely levigated clay, whereas bread molds were handmade, probably around a conical form, from clay that was heavily tempered with chaff and sand. As it turned out, the thirty odd pots in our consignment did not match the bread mold in thickness of the walls, porosity of the clay, or exterior profile. Chris Sloan, Art Director for National Geographic, imported both clay and chaff to his room in Mena House where his window sill became a work bench for manufacturing sample ceramic fabrics, models of bread molds and one complete bread mold, much to the shock of those who cleaned his room!

It was very insightful to see the full complement of vats and bread pots laid out along the low walls or set within the space of the bakery. The low walls all around must have served as "counterspace" for keeping the empty pots and finished bread. Ed Wood's requirements for sourdough gave rise to other insights. It was clear, for example, that we needed separate containers for water, flour, and ferment (fig. 1)—perhaps the reason for the three vats in the northwestern corner (fig. 2). A separate vat, of which there was evidence along the western wall of one of our bakeries, was probably for mixing these ingredients. Even the design deficiencies of our bread pots provided insights, for example, the sharp inflections of the exterior walls of the pots are important for the ancient practice of including
of stacking about a dozen pots over an open fire in order to preheat them. We believe we may have resolved the question of why the ancient bakers needed to stack-heat the pots over an open fire. The high porosity and thickness of the walls of the ancient pots provided a significant control of ambient heat to prevent scorching the crust before the crumb is baked through. We may have shed new light on the reason for making bread in large pots as opposed to simply slapping dough against a hot surface to make flat bread.

The elucidation of these and other mysteries of the Egyptian bread pot must await a fuller discussion. In the end we did produce edible bread from various combinations of barley and emmer, albeit a bit too sour even for most sourdough tastes (the sourness is easily remedied). While much of the data is anecdotal, the insights are useful for interpreting our ancient bakeries. We have some clues as to why this kind of production was so common in Old Kingdom Egypt. The exercise reinforced an awareness that specific attributes of specific artifacts are not trivial. Rather they are the keys to artifact function, the knowledge of which contributes to understanding the structures of everyday life that are the fabric of any society and economy.

Field Season 1994–95

Our next field season is scheduled for December 1994 through February 1995. We will return to the site of the bakeries with a more complete understanding of how they functioned. We will hopefully not find more bakeries. Given some indication that every large household and institution in ancient Egypt could have granaries, bakeries, breweries, and other industries attached in a modular fashion, it may be that the real story of this site is to be gleaned from the large mudbrick building that is, perhaps, the hub of the institution to which the bakeries are attached. This will be the focus of our excavations in area A7 as we also will continue to investigate our other excavation areas to the south of the Sphinx.

Digitizing the Nile Valley Floor

The analysis of the archaeological data from the AMBRIC/Cairo Waste Water Project by our colleagues, Zahi Hawass and Michael Jones, is crucial to the assessment of our excavations at Giza. Widespread remains of ancient settlement under the modern town along the entire length of the Giza Plateau are indicated. During a trip to Egypt in early May 1994 to begin to prepare for next year’s field season, I had the opportunity to see the large limestone and basalt wall that was discovered this year by modern construction activity about five hundred meters to the east of the location of the Khufu Valley Temple. The location and orientation of the wall must be added to the evidence for areas of settlement, harbors, canals that fed the Giza Necropolis, and the possibility of a Nile channel that ran close to the Giza Plateau. Some of these large features may have left traces in the current
topography of the valley floor near Giza, even though we now know that there has been two to four meters of alluvial aggradation since the Pyramid Age. We can learn something about the structure of the settlement along the base of the Giza Plateau by relating these contours to the locations of the pyramid complexes, to features like the wall, and to evidence from the waste water project and our own excavations to the south of the Sphinx.

Because of these interests, we began at the Oriental Institute Computer Laboratory to digitize the contours of the valley floor in the 1:5,000 map series of the greater Cairo area, an invaluable data set that includes one meter contour intervals for the sites of most of the Old Kingdom pyramids. We have made the data set available to the projects working within the area we have so far covered. The composite map and three-dimensional imaging that we have produced, after digitizing the contours on each large map sheet, can be used for the analysis and illustration of the ancient river courses. The Egypt Exploration Society, under Harry Smith, Lisa Giddy, and David Jefferies, has begun to relate the eastward migration of the Nile to the settlement patterns in the area between the Saqqara Plateau and the ruins of ancient Memphis at Metrihina. Combined with the results of the AMBRIC data at Giza, the emerging picture of the Nile during the Old Kingdom, as Jefferies pointed out to me, is important for understanding the locations of pyramid complexes in terms of proximity to desert edge lakes and residual river channels that the pyramid builders may have used for access to the pyramid harbors. This reconstruction is likewise important for our knowledge of settlement patterns in the northern “capital zone” over the entire course of Egyptian history.

Acknowledgments

We are grateful to the members of the High Council for Antiquities who make our work possible: Dr. Abd el-Helim Noureddin; Dr. Ali Hassan, Director of Antiquities for Pharaonic Monuments; and Dr. Zahi Hawass, Director General for Giza and Saqqara for his assistance and collaboration in the research.

David Koch and Bruce Ludwig make research possible through their generous financial support. For assistance and insight on the bakery I would like to thank Wilma Wetterstrom, paleobotanist for our project; Ed and Jeane Wood; Elie Rogers, Chris Sloan, Kenneth Garrett and David Roberts of National Geographic. Chris Sloan and National Geographic have also helped with the project to digitize the Nile valley floor in the pyramids zone for which I am grateful. I truly appreciate all the outstanding work of Peggy and John Sanders on the various computer applications to the Giza Project.
THE 1993 EXCAVATION SEASON AT GÖLTEPE, TURKEY

K. Aslıhan Yener

In 1993 the Early Bronze Age workshop and habitation site of Göltepe and its associated tin mine, Kestel, became the newest members of the Oriental Institute excavation roster. Excavations at Göltepe during the 1993 season were directed by K. Aslıhan Yener and were designed to illuminate the origins, formation, and organization of tin production in the central Taurus Mountains of Turkey. Discovered during ten years of archaeological and mineralogical surveying in metal-rich zones, the results of these archaeometallurgical investigations yielded the solution to an enigma puzzling scholars for decades—a source of the elusive tin of antiquity, a 5–10% concentration of tin with copper that produces a good bronze.

The 1993 excavations were conducted under the auspices of the Turkish Ministry of Culture, Directorate General of Monuments and Museums. The team consisted of field director Thomas Chadderdon and field supervisors Chris Monroe, Eric Klucas, Eric Jean, and Philip Andrews. The groundstone tools were tackled by Dr. Robert Hard and the ceramics by Dr. Sylvestre Duprës and Behin Aksoy. Conservation was ably managed by Stephen Koob and Fazil Açıkgoz. Replication smelting experiments and analyses of metallurgical debris were undertaken by Bryan Earl and Dr. Hadi Özbal. Palaeobotanical materials were studied by Mark Nesbitt and the faunal collection by Dr. Alan Gilbert. Analyses of crucible slag and residues were undertaken at the University of Chicago by Dr. Ian Steele, Mieke Adriens, and Laura D'Alessandro of the Oriental Institute. Ayşe Özkan and Brenda Craddock comprised the illustration staff. Tony Wilkinson of the Oriental Institute researched land use patterns. John and Peggy Sanders of the Oriental Institute Computer Laboratory digitally rendered the topographical maps and plans.

Göltepe is located two kilometers opposite Kestel mine on top of a large natural hill in south-central Turkey. The hill measures close to sixty hectares total and is fortified at the summit, with cultural deposition throughout the entire extent of its surface. The size of the settlement is estimated to be between eight to ten hectares, and combined with the Kestel slope occupation probably totals sixty hectares in a man-mine system. $^{14}$C uncalibrated dates from the 1990 season at Göltepe range from 3290–1840 B.C. A dendrochronological date of 1978 ± 37 years was obtained for a piece of charcoal from a pit fill context. Five samples of charcoal from excavated contexts inside Kestel mine gave radiocarbon determinations 2070–1880 B.C. calibrated to 2870–2200 B.C., dating the use of Kestel mine firmly in the Early Bronze Age. Another series of six recently obtained dates suggests an earlier beginning for the mine, 2740 B.C. ± 100 calibrated to 3240–3100 B.C. Excavations began at Göltepe in 1990 and continued in 1991 and 1993. Parallel excavations proceeded at Kestel mine in 1987, 1988, 1990, and 1992.
A total of 858 square meters were excavated at Göltepe in 1993 (fig. 1). Göltepe is architecturally unlike any site in Turkey—the workshop/habitation units are ovoid semi-subterranean and fully subterranean pit structures, which are cut into the graywacke bedrock with smaller subsidiary bell-shaped pits in association with it. Smaller houses measure 4–6 meters in diameter. Larger units measure nine by seven meters and are terraced off the slope, much like the neighboring mountain village, Celaller. The superstructures of these units are wattle and daub and great numbers of branch impressions on mud and structural daub substantiate this suggestion. Postholes were found in a number of structures this year, which may enable us to reconstruct the shape or pitch of the roof. Unique also are what appear to be clay structural elements—geometrically designed panels, which may have decorated the interior spaces of the pit structures or provided decorative borders for doors, bins, and altars.

Due to the difficult nature of the cultural deposition, that is, pit houses dug from above with very little overlay, extremely delicate and meticulous care was afforded the excavation trenches in the four areas of excavation: Trenches B05/B06, Trenches E62–E69/E70, Trenches C16/C01/C02/D67, and Trenches A15/A23/A24.

**Area A (Trenches A15/A23/A24)**

The excavations at the southern end of the summit expanded trenches that were begun in previous seasons. A total of sixty-two square meters were exposed in this sector. Two pit structures measuring 2.0 × 2.8 meters and 3.5 × 2.0 meters (fig. 2) were exposed that appear to be workshops as inferred from the contents of the
rooms. Postholes were identified in the larger pit structure, A23-0900-015, and a superstructure of wattle and daub is inferred by the branch impressions on vitrified mud lumps in collapse levels. These units were plastered repeatedly and decorative panels of clay were found inside, which may have been used on the walls. An additional seventeen smaller pits were cut into the bedrock, probably serving refuse and/or storage functions, and ranged in size from under one meter in diameter and less than one-half meter in depth to several meters. All of the pits were filled with debris of a similar nature—small to medium stones, groundstone tools, relief decorated slabs, tin-rich crucible fragments, powdered ore and ore fragments, charcoal, and ceramic sherds.

Of special note were two floor assemblages—an entire metallurgical tool kit (fig. 3), consisting of a moveable brazier, crucible with stone cover, groundstone ore crushers, mortars, bucking stones, kilograms of ore powder, and ore nodules.

Five phases (see below) could be identified in this sector. A major stratigraphic and architectural break is visible between Phases III and II, when the pit structures were intentionally filled in and free standing—above ground—stone structures were erected over them.
Area B (Trenches B05/B06)

Area B presented evidence of somewhat different architecture and greater depth of deposit. A total of one hundred fifty-four square meters was exposed in this slope facing the mine. A one meter wide profile trench and resistivity testing in 1991 had already revealed a strikingly dissimilar cultural topography from the current natural topography. The profile indicated that three terraces had been cut on the slope into the bedrock for leveling and structures were constructed into each of the terraces. One terrace was trenched up to four meters and walls were erected in front and parallel to these cuts in a substantial slope structure. This mode of construction is still in evidence in Celaller village, which gives the appearance of extensive slope trenching to emplace houses similar to a staircase, each roof serving as the front entrance of the house above.

The decision was made to expose the larger structures and one unit measuring 9 x 7 meters was bordered by a stone wall on the eastern side but was cut into the bedrock on the northern and southern sides. No wall was found on the western, downslope side, thus the method of roofing and the exact size of the unit is still unknown. A plastered feature with three compartments, which was built with small stones and reused clay blocks with geometric designs, was found in the northern side of the room. To the south of this bin-like feature a floor assemblage was located consisting of 10-12 kilograms of powdered ore, groundstone tools, and ceramics. Another house unit, cut from above and partially destroying the southern edge of the first structure, may be slightly later but is still dated to Phase II. A geometrically decorated altar-like clay feature (fig. 4) slightly off center in the room and a pyrotechnological feature in the northeastern corner were found in situ. Finds found on the floor and fill of this structure included groundstone mortars, grinders with ore still on the stones, kilograms of powdered ore, crucible fragments, a lead ingot weighing 170 grams, and a silver-tin alloy necklace.

Areas C and D (Trenches C16/C01/C02/D67)

The excavation of this area was motivated by the results of resistivity testing. A total of 165 square meters were excavated. Several large subsurface features had emerged in 1991, and a decision was made to locate these units in an area that was largely unexcavated in previous years. After a number of fruitless shallow exposures, Early Bronze Age pit structures with ovoid plans emerged paralleling the earlier finds on the other sectors of the site. Several internal modifications had been made in these units; for example, rooms or storage compartments were added by erecting scrappy stone walls. Large storage vessels, clay figurines, molds for metal implements (fig. 5), powdered ore, and crucible fragments emerged from the floor and fill inside these units.
The structures were burnt in a final phase of collapse and abandonment.

Several Iron Age levels, which belong to Phase I, were discovered in this sector and on the summit. The first evidence of Iron Age settlement of the site had been revealed in the 1991 Area B exposures and in 1993 we identified several reused Early Bronze Age pit structures that dated to the early Iron Age. A floor was discovered with iron implements and ceramics in situ and a well-preserved hearth was found in the western corner of an Area D structure. A limited, perhaps seasonal occupation can be inferred from these scrappy remains.

Area E (Trenches E62–E67/E69/E70)

The widest horizontal exposure, 165 square meters, was achieved in this area situated on the southwestern slope (see Computer Laboratory report (below), fig. 4). In 1990 a number of test pits revealed the depth of deposit and possibility of subsurface structures. In addition an attempt was made to expose the southern extent of the circuit wall, exposed in Area B further to the north at the same elevation. The circuit wall was indeed revealed and found to be constructed of large and small irregular blocks of limestone. A minor entrance into the settlement and a street leading in a northeastern to southwestern direction were identified. Several terrace walls were trenched into the bedrock further upslope in this sector as well.

One pit structure with several phases of occupation was identified with a large collection of pottery on the floor. Several large storage vessels were found placed in the eastern side of the room. To the south of the pit house, a midden containing thousands of crucible fragments of the larger variety (20–50 centimeters), as well as a great amount of powdered ore (30 kilograms) was unearthed. Many refuse pits yielded typical debris of metallurgical nature.
In a bell-shaped pit underlying the midden, crucibles with smaller diameters were found, suggesting that the size of crucibles may have increased in time. Another refuse pit contained hundreds of cow and sheep/goat horn cores.

Overlying these pit structures and bell-shaped pits were remains of Phase II, with large, above ground stone structures. Seemingly filled and leveled in one event, the pit structures were superseded by a house terrace measuring nine by fifteen meters. No plans or remains were found of the structure that assuredly would have been erected on top of the terrace. Several stone walls placed in an east-west orientation, as well as the circuit wall, date to this period of expansion at the site.

**Stratigraphy and Phasing**

Basal pits distinguish the earliest phase, Phase V. Phases III and IV are characterized by subterranean pit structures and bell-shaped storage/refuse pits. Tentatively they correspond to the Early Bronze Age II period on the basis of pottery parallels with Tarsus. The bulk of the ceramics are burnished wares and Anatolian metallic wares.

A stratigraphic break and architectural reorientation is represented by Phase II, which is characterized by the construction of above surface free standing structures and represents a period of expansion. The walls of Phase II buildings were often built over the underlying pit houses that were filled in with industrial and domestic debris. Although pit structures continued to be built, large walled structures are erected on top of massive terraces constructed of colluvial stones. In Area E, only the terrace is preserved; the architectural plans of the structure are lost to erosion. The circuit wall dates to Phase II and corresponds roughly to Early Bronze Age III in Tarsus terms. At Tarsus there is an architectural break between Early Bronze Age II and III as well, when megaron-related structures appear.

The uppermost levels are assigned to Phase I, which includes topsoil and transitional levels that span from the collapse and abandonment of the site at the end of the third millennium B.C. to the mixed context of the Iron Age. In one restricted sector of the eastern slope, Iron Age reuse of Early Bronze Age pit houses was identified.

**Site Size Determination**

Determining the horizontal extent of the site was an important goal for the 1993 season since a size of sixty hectares is an anomaly in such an agriculturally unfavorable environment. In previous years subsurface features were mapped by magnetic resistivity sampling in tandem with one square meter test pits in an attempt to determine the size of the site. During the 1993 season, thirty-six stratigraphic profile trenches were executed over the entire site. These stratigraphic trenches were one meter wide and ten to twenty meters long; profiles were drawn for both sides of the trenches. A total of 338 square meters of stratigraphic trenches were executed in a radial configuration around the site.

This procedure allows two conclusions to be drawn. First, the circuit wall does surround the site, although in places it may also function as a terrace wall. Secondly, the perimeter of the site is now more in line with a believable area. The area of greatest density, within the walls of the summit, measures five hectares; less dense, scattered extramural settlement covers eight to ten hectares. This is a
conservative estimate and it is still possible that pit houses were dug all over the landscape between the site and the mine. These estimates, of course, do not include Kestel mine, or its one kilometer slope area, where evidence of structures and contemporary pottery was also found in previous seasons of work. Thus, linked together as a man-mine system, the sixty hectares total is probably close to reality.

**Establishing Tin Metal Production Yields**

Some of the more important finds related to the processing of tin have been the vitrified earthenware crucibles with a glassy slag accretion rich in tin. Constructed with a coarse straw and grit tempered ware, the crucibles have slugged surfaces with a tin content of 30 to 90% and rim diameters that range in size from six to fifty centimeters. In some instances tin metal particles were entrapped in slag and identified by microprobe, scanning electron microscopy, and x-ray diffraction as the product of the smelt. The activities, which are demonstrated by analysis at the Conservation Analytical Laboratory of the Smithsonian Institution and the Enrico Fermi Institute of the University of Chicago, include a labor intensive, multi-step, low-temperature process carried out between 800° and 950° C.

Processing involved intentionally producing tin metal by reduction firing of tin oxide in crucibles—with repeated grinding, washing, panning, and resmelting. The raw materials being processed in the crucibles consisted of tin oxide (cassiterite) with no copper ores present, along with calcium carbonate, iron oxide with minor amounts of magnesia and titania, an alumino-silicate containing more than 12% potassia, and soda and charcoal as the reduction agent. This recent evidence finally puts to rest the initial skepticism as to the concentrations of tin in the Taurus and reveals it to be an important tin processing center.

Measurements were made of industrial debris in an effort to define quantitatively processing parameters. Some seventy kilograms of ore powder and fifty kilograms of ore nodules from excavated contexts were weighed and the total assemblage of crucible fragments from this season alone weighs one ton. In addition, chronological distinctions can now be made with the varieties of crucibles found in different sectors of the site, which will enable a clearer picture of how the industry changed through time to meet increasing demands for the product, tin. An earlier, smaller crucible type (17–20 cm diameter) and a later, larger crucible (20–60 cm diameter) will be part of the database for a household assemblage investigation of craft production. A substantial amount of ground ore was found inside ceramic vessels. Some ore powder may represent slag, which may have been pulverized to release the tin ore entrapped in the slag during the smelting process. Flat ax and chisel molds made of clay were also found. Since no debris, slag, or material relating to copper production was found at the site, it is assumed that the alloying process took place elsewhere.

In conjunction with the above analytical programs, several replication experiments are now on-going to test the feasibility of the production model, the physical conditions required, and the expected end products. B. Earl of Cornwall and H. Özbal successfully smelted tin metal in the field in 1992 and again in the laboratory during 1993–94 utilizing tin powder found in Early Bronze Age II/III contexts. Enriching with one cup of water a low grade 1% cassiterite ore mixture to approximately 10% by vanning (panning with a shovel), this charge was then placed in a homemade crucible made with local clay and chaff temper. The charge, which was found in cups from the floor of Early Bronze Age pit structures, was placed in suc-
cessive layers of charcoal and after twenty minutes of blowing through a blowpipe, tin prills entrapped inside an envelope of glassy slag emerged inside the crucible. During this experiment tin metal prills (globules) encased in glass slag were released by grinding with a lithic tool. The slag was thus in powder consistency and was virtually invisible unless microscale sampling methods were introduced.

While it is recognized that cassiterite alone will smelt directly in a crucible, such a process requires reduction by carbon-rich gases and would generate little slag. Smelting thus results in a multi-step production of tin metal with refining accomplished by washing, grinding, and remelting. Although highly labor intensive, the smelting process is simple and does not require technical sophistication. The industry as a whole, however, does represent a sophistication typical of third millennium metallurgy in Anatolia. The skill of the ancient metallurgists was highlighted by a new find, a coiled necklace made of an unusual alloy: silver, tin, zinc, and copper. Other metal objects, such as bronze and lead, as well as molds were excavated from the pit houses.

**Computer Digitization of Topography and Site Plans**

Upon becoming a faculty member at the Oriental Institute several research facilities became available for the project. One of the most important is the Computer Laboratory run by John and Peggy Sanders. The architectural plans of Göltepe and the large and small scale site plans with contours and excavated areas were all digitized using AutoCAD version 11 on an IBM-compatible computer. At this point the plans of the excavation are being plotted in AutoCAD as well, whereas the large-scale surface terrain of the entire mountainous region around the site is being produced with the ARRIS program and its Topographer module on a Sun SPARCstation computer.

**Assessment of Results and Prospectus for Future Work**

An expanded program is planned in subsequent seasons. Apart from the testing of excavation units, processing, analysis, and recording procedures and systems, the areas of excavations were successful in providing information on a number of points important for determining future operations.

First, it is apparent that most of the hilltop site was occupied during the same period—the early/mid- and mid-/late third millennium B.C.—with some clues of possible earlier or later occupation. The area enclosed by the circuit wall (300 x 450 m) may suggest that all sectors were part of a single settlement rather than complementary and alternating smaller settlements. However, the 1993 excavations have demonstrated that in the late third millennium the settlement expanded beyond the circuit wall. The prospects are excellent for aiming at deriving data for zonal urban quarters and other aspects of intra-site organization, especially since coherent architectural remains are to be found in well-preserved levels just below the surface. Zonal patterns are indeed indicated not only by the morphology of the site, but also by differences in architectural units in A23, A24, (domestic and specialized), B05 (public), B06, E69 (specialized), and other features of as yet indeterminate character (stratigraphic trenches on the lower slopes). This variation is further supported by finds contexts: concentrations of crucible fragments, molds, dressing stones, and ores in Areas A and B; the large scale mortars and workshop stalls in A15 and A23; and the pithos storage jars and domestic utensils in E63 and D67.
Since the western slope does indeed yield the remains of a more substantial public building complex surrounded by domestic and/or industrial quarters on the spurs and terraces, it is interesting to ponder the apparently distinct role played by the workshops along the slopes of the Kestel mine and the linkage between them and the workshops on Göltepe. It seems logical that the Kestel slope area must have been used for a special purpose. Alternate explanations for the use of this area may be as a separate year-round settlement at Göltepe with industrial sectors for fine dressing and casting of metal, as a separate ceremonial sector located at the larger site, as a seasonal settlement with heavy crushing workshops at Kestel, or as a commercial sector or trading harbor at the larger site at the lower slopes near the silk route crossings.

Since few of the finds have been analyzed in any detail, a couple of points relevant for future study can be raised. First, the occurrences of crucible fragments with tin-rich slag accretion, ingot molds, and vast quantities of ore and ore dressing stones point to an important early urban industrial activity. The appearance of tin bronzes at this time and their distributions in Anatolia, Syria, and Mesopotamia have long been documented, but their production and transmission—which follow a distinct qualitative and quantitative pattern during the period of early urban formation and increasing Mesopotamian demands—have not been examined in detail commensurate with their potential importance in tracing commercial patterns in this area. In theory metallurgy is a constantly changing technology. A number of attributes that also vary with these changes can be easily measured in the field. For example, it would be possible to see shifts from production level of a cottage industry to more complex strategies. The intensity of metal production and the organization of metal crafts are archaeologically definable at Göltepe. Extraction of different ores, changes in smelting installations, changes in metallurgical residues such as crucible slag, or a shift in semifinished products such as ingots may have been for political or socioeconomic reasons unrelated to metallurgical knowledge. If there is an initial development, and a later stagnation linked to economic fluctuations in the demand of metal as a commodity, other aspects of material culture would co-vary with the increased demand for metals. Second, an analysis of individual building units, or larger community patterns, has rarely been possible or attempted for the highland metal zones. Changes in the organization of domestic areas, storage facilities, workshops, and in the quantities and variety of goods within these areas would need to be investigated. Göltepe has provided an ideal opportunity for defining the archaeological cognates of craft specialization and its organization. Finally, an analysis of ecofactual material, the semi-subterranean architectural techniques, as well as lithic remains, suggesting hunting-gathering continuity and the impact of this whole industry on the environment and vice versa has rarely been possible or attempted for such an alpine resource zone.

Conclusion

The work done during the 1993 season has gone a long way towards couching intelligent questions regarding the context and organization of tin production in the region. Were specialist laborers operating out of a larger site? Was it part of a more complex system or was it a cottage industry? The possibilities are interesting and quite varied. Clearly tin was processed at Göltepe, and to judge from the quantities, on a large scale. This ground breaking investigation will continue to generate data that will enable us to define an unknown technology of critical strategic
importance. The research has clearly defined goals for understanding the technology within its cultural context. The proposed research will investigate tin production in terms of technology, the archaeological context, and its integration with neighboring regions. The chronological and cultural sequences for Göltepe and Kestel will provide an important frame of reference for a critical region of the ancient Near East that is little known archaeologically.

THE LUXOR-FARSHÛT DESERT ROAD SURVEY

John Coleman Darnell and Deborah Darnell

During the 1993–1994 season, the Luxor-Farshût Desert Road Survey continued work on the main road and began investigations of subsidiary and related routes. The sites examined this season were located on the primary track which ascends "Gebel Antef" (as we refer to the apparently unnamed tongue of gebel overlooking the northern branch of the Western Valley of the Kings; see map) and returns to the valley floor at the Wadi el-Hûl, as well as along the ‘Alamat Tal Road, the Darb Ba‘irat, and the path leading up to and continuing behind the Thoth Mountain.

Gebel Antef

We located further fragments of the Seventeenth Dynasty chapel that we discovered on Gebel Antef during our initial surveys of the road (see our report on the 1992–1993 season in last year’s Annual Report). One of our major finds last season was a portion of the sandstone doorjamb of this shrine, preserving the cartouches of a King Antef and a King Sobekemsaf; the orthography of the nomen Antef pointed to King Nubkheperre Antef V, an identification confirmed by a graffito documented this past season. On a sandstone block of the temple, we found a crude representation of a falcon atop a serekh, containing the vestiges of the Horus name of Antef V, Neferkheperew, “Perfect of Manifestations.”

A notable addition to the remains of the chapel is a large block, a sliver of the lintel of the doorway. This fragment, apparently flaked off the bottom of the lintel, preserves a portion of the throne of a seated deity, identified as Osiris in a portion of a vertical column of text behind the throne. Another piece of the doorjamb bears the remnants of hieroglyphs that appear to belong to the epithet of Osiris as Khentimentiyew, “Foremost of the Westerners.” These bits of inscription suggest that the deity to whom the shrine was dedicated was the Abydene Osiris, an appropriate dedication since one of the forks of this desert track led to Abydos.

To the votive objects discovered in the area of the temple last season, we can add the tiny, shattered fragments of a steatite statuette, possibly the figure of a falcon, found nearby this season. No doubt many other small objects originally left in and around the temple have been carried off by travelers on the road.

During our first survey we found several pieces of a broken stela dating to the
early Third Intermediate Period. As a result of investigations in the archives of the Egypt Exploration Society in London, we now know that the Mond Desert Expedition discovered a stela similar to the fragmentary Gebel Antef stela on the high desert over Armant, along the Armant to Nag‘ Hammadi Road. That unpublished stela has the same date as the stela on Gebel Antef, and the text, though also very fragmentary, contains many of the same terms as the Gebel Antef stela. Both stelae attest to activity in the Western Desert during the early Third Intermediate Period and recall other evidence of similar activity at that time, such as the Banishment Stela, and the fortresses of the high priest Menkheperre at the Nile termini of desert roads. Both stelae mention a “road of horses,” a new feature of the Theban desert gazetteer.

Behind the chapel area mapped last season, we completed surveying the forest of votive cairns and drystone shrines on the back portions of the Gebel Antef promontory. As part of our investigation of several sites located along the road farther to the northwest, we made an initial study of a group of drystone huts with walls preserved in some places to a height of sixty centimeters. Pottery of the pharaonic and Graeco-Roman periods was evident in and around the structures. Farther back on the road we also continued to study two drystone “dolmen”-shrines overlooking the low desert area of Kom el-Abd and Kom el-Ahmar; the shrines are located a few meters to the south of the road where it skirts the head of the Wadi Agala. Associated ceramic evidence, including a fine blue-painted vessel, suggests a late Eighteenth Dynasty date for these constructions. In appearance and location they closely parallel a large group of rough stone shrines, dated to the Ramesside period, which Norman and Nina Davies discovered on the side of the Qurn during the 1930s.

The ceramic remains at Gebel Antef point to two periods of intense desert traffic along the road—late Second Intermediate Period to early New Kingdom, and the Saite Period, with much of the Saite traffic related to the oases. We have continued to find remarkably large quantities of pilgrim flasks (fig. 1b), “gourds,” and barrel-shaped water jars made of various types of oasis ware, reinforcing the view that the Farshút Road is the ancient Theban link to the oases alluded to in ancient documents but never clearly identified. Although fragments of vessels from the Second Intermediate Period to early Eighteenth Dynasty are most abundant, occurring in many loci, the later ceramic material is also quite fascinating. Most intriguing is a type we have termed “desert ware,” which often takes the form of handmade bowls such as the one depicted in figure 1c. This particular example was coil-made; the paste has a dull gray-buff exterior with a bright orange fracture...
A cup to be strung up for transport, was made prior to firing. We have found vessels of this and related types on the main Farshūt Road, the Darb Ba‘irat, and the approach to the Thoth Mountain; we have seen such pottery on auxiliary tracks out of Armanit and in the walls of reused portions of the Colon­

nade Hall at Luxor Temple. Similar vessels have been found in Theban tombs, at the Seti Qurna Temple, and in the High Desert over Armanit, but the ceramic type has never before been fully analyzed or firmly dated, though it appears to date from between the twelfth century A.D. and the early modern period. Many of our examples are of a paste which bears a strong resemblance to oasis ware; these may have been manufactured in the oases or in the Western Desert. We hope that continued study of this most interesting type will clarify some of the problems regarding its origin and use and perhaps shed light on the movements of early Bedouin groups in the region of the Qena Bend.
The Wadi el-Hôl

Near the middle of the Farshût Road, where the main track descends the cliffs behind El-Halfaya, we began work in the Wadi el-Hôl, an area of extensive graffiti. These graffiti include texts from the reigns of Amenemhat III, Sobekhotep III, and Amenhotep II. Many of these graffiti were discovered by the Mond Desert Expedition in the 1930s, but none were ever published. In addition to the graffiti that were located in the 1930s, we have thus far identified at least one new concentration of pharaonic graffiti at the site. Thanks to the indispensable help of Richard Jasnow and Tina Di Cerbo, we were able to copy more than twenty-five graffiti during the past season (fig. 2), and we hope to visit the site to collate these graffiti and copy other texts and scenes on several occasions during the third season. Though it is far removed from the cultivation, vandals have recently attacked the site and have completely destroyed a number of inscriptions. We hope within the next few seasons of work in the Wadi el-Hôl to prepare all of the significant graf-
fiti for publication and to record as many as possible. Many of the texts date to the Twelfth and Thirteenth Dynasties, although there are a number of later graffiti.

Figure 3a shows one of the graffiti from the area that we discovered this season, the drawing—somewhat crude but full of character—of the man Ḥepi. This man gives no title for himself; many of the other graffiti are those of people who term themselves simply “scribe,” suggesting a continuous and extensive use of the road by “private” individuals and lower level officials (lack of specific titles might indicate a date in the Seventeenth Dynasty, when titles underwent considerable changes; the prosopography of the graffiti examined thus far, however, suggests...
the Thirteenth Dynasty as the most likely date for many of these texts). In this there is somewhat of a contrast with the graffiti from the Twelfth and Thirteenth Dynasties at Wadi el-Hudi, in the Wadi Hammamat, and in the Sinai, where records of large, official expeditions predominate. Figure 3b gives the two lines of an hieratic inscription that reads:

"Regnal Year 17, first month of the Shemu season, day 17: Spending the day by the scribe Monthuhotep beneath this mountain on holiday ..."

The ceramics at the site correspond well with those discovered at the Theban terminus of the road and—as at the Theban terminus—include a number of vessels clearly made in the oases of the Western Desert. At a point between the Wadi el-Höl and Halfaya Bahri, where several other tracks join the Farshút Road, we located the extensive remains of a caravan rest stop, with a large mound of pottery over two and one half meters deep (fig. 4). There and at the Wadi el-Höl, thieves have cut large trenches into the mounds of ancient debris, but much material remains, and much information may yet be salvaged from these vandalized sites. The profiles revealed by the destructive acts show layer after layer of potsherds and organic remains, including dung, ash, and possibly animal fodder. Late Second Intermediate Period to early Eighteenth Dynasty sherds can be seen projecting from a middle level of one of the cuts; the depth of the deposit is as yet unknown.

Based on the epigraphic evidence, there was heavy traffic through the Wadi el-Höl during the Twelfth and Thirteenth Dynasties, and a certain amount of activity from the early New Kingdom through the early Islamic period. Although from the pottery we know that there were visitors during the Seventeenth Dynasty, they appear to have left no texts. Perhaps during the troubled time of the Theban/Hyksos wars, what traffic there was on the road did not have the leisure to "spend the day" carving names and dates on the rocks; much of the traffic may in fact have been

Figure 4. Deborah Darnell and Inspector Ramadan Ahmed Ali examine potsherds in a robber's cutting at a caravan stop between the Wadi el-Höl and el-Halfaya
military and police patrols, and many of the members of these desert patrols may have been Nubian auxiliaries, perhaps not yet so Egyptianized as to be able to immortalize themselves through written graffiti. Near the cartouches of Amenhotep II there is a drawing of a man holding a round-topped shield in one hand and a bundle of spears in the other—he may be one of the unlabeled memorials to this exciting and pugnacious time.

The ‘Alamat Tal

On the "‘Alamat Tal" Road located to the north of the Thoth Mountain, before now indicated in part only on the old Schweinfurth map of Western Thebes, we identified and mapped the remains of two rubble and mudbrick structures, apparently once watch towers along the ancient caravan route (fig. 5). On the basis of pottery, including fragments incorporated within the bricks, we can date the structures to the late Second Intermediate Period. Such round towers are depicted in objects from the early Old Kingdom, are apparently described in the Prophecy of Neferty, and their descendants were depicted by Napoleon’s servants in the Description de l’Égypte (as a pair, like those on the ‘Alamat Tal Road). The towers appear to have rested on brick platforms built atop the desert surface, with large boulders interspersed among the bricks (suggestive of roughly contemporary brick casemate-and-rubble foundations at Ballas); a glacis of rough stones surrounds the base of each tower. The bricks were bonded by patties of mud placed over the joins of bricks (fig. 6), a water-saving technique of mortar application that appears in the construction of the Se‘ankhkare chapel and in the vaults of the Ramesseum’s storerooms.

As the ancient nome boundary also once ran near this site, roughly parallel to the caravan route, it is conceivable that these structures were customs houses. We identified the faint but broad sweep of tracks continuing behind the brick and rubble structures, and sampled pottery in the area of the towers and along the road. Though some Roman and Christian sherds were present in certain areas, initial sampling shows a predominance (at least 6:1) of Second Intermediate Period to New Kingdom remains (fig. 1a). During the coming season we hope to follow this unmapped track to the point where it ascends the gebel behind Naqada. Based on what we have encountered thus far, it is impossible not to be optimistic about what we may find.

The Darb Ba‘irat

The Darb Ba‘irat, beginning to the south of the Qurn and joining the Farshút Road several kilometers back on the plateau, is a longer and in general less steep ascent to the high desert, which appears to have been used during all periods from as early as the Second Intermediate Period. In contrast to the main Luxor-Farshút
Road, the Darb Ba‘irat was most heavily trafficked during the Graeco-Roman Period. The explanation for this perhaps lies in the angles of ascent of the roads. During the pharaonic age, desert travel was primarily on foot with donkey trains; steep paths are no deterrent to men and donkeys, who would have preferred the conveniently located, though steep, main road. The camel came to predominate in desert travel during the Late Period; the camel prefers gentle ascents and descents, such as the somewhat out-of-the-way Darb Ba‘irat offers.

The Thoth Mountain

One of the most distinctive features one notices on the approach to the Thoth Mountain is the network of low, drystone walls running along the slopes of the gebel. Similar walls may be found in the wadi between the Thoth Mountain and the Farshút Road, crossing the beginning of the Farshút Road, and along the approach to the plateau in the Armant desert, in association with the Darb Armant. We are currently studying the significance of these features. The track behind the Thoth Mountain temple does not appear on any maps. This path joins the main Luxor-Farshút Road and closely parallels the main road in having a temple located atop the high desert at the Luxor terminus. From our initial investigations, this track appears to have been the least heavily used of the roads that we have thus far examined. Yet it is one of the more well-marked roads away from the edge of the escarpment: an intervisible series of pairs of cairns guides the traveler across the featureless plateau. The relatively sparse ceramic remains do attest to some use at many periods, with the Middle Kingdom and the Second Intermediate Period predominating. Near the beginning of the road we discovered several limestone fragments of the Eleventh Dynasty chapel, including an architectural element preserving a portion of the name “the Behdetite,” the name of the winged sun disk (fig. 7), the lower part of a winged sun disk, and a bit of inscription that provides the link between two fragments published (separately) at the beginning of this century.

In addition to continuing our work in the areas described above, we have visited several very promising sites in the Armant desert on which formal work will commence next season. These include the Darb Rayayna and its subsidiary tracks.

Figure 7. A limestone fragment belonging to the Se‘ankhkare temple with a portion of the hieroglyphic label “the Behdetite”
The members of the Luxor-Farshût Desert Road Survey during the second season were John Coleman Darnell and Deborah Darnell. We were joined by Mr. Ramadan Ahmed Aly as representative of the Egyptian Antiquities Organization, a cheerful and valuable addition to our staff. Dr. Peter F. Dorman, Field Director of the Epigraphic Survey, has again earned our heartfelt gratitude for sponsoring and assisting this project. We thank Dr. M. Abd el-Halim Nur El-Din, Chairman of the Egyptian Antiquities Organization for his support. We would like to thank Dr. Mohammed es-Saghir, Supervisor of Antiquities for Upper Egypt for his continued interest, advice, and help. We thank Dr. Mohammed Nasr, Chief Inspector of Qurna, for his assistance. Once again, Helen and Jean Jacquet of the Karnak-Nord expedition offered valuable advice on ceramic analysis, surveying, and architecture, for which we are extremely grateful. Dr. Colin Hope contributed his detailed knowledge of blue painted ceramics and oasis wares, and Dr. Donald Whitcomb has continued to provide advice on Islamic remains. We thank Dr. Stephen Quirke for his interest and advice, particularly as regards the prosopography of the visitors to the Wadi el-Hûl. As before, Dr. Anthony Leahy, Dr. Patricia Spencer, and the staff of the London office of the Egypt Exploration Society allowed us to consult their files and extended to us every courtesy. We also thank Barbara Adams, Peter Clayton, Dr. Vivian Davies, Renée Friedman, and Dr. Raymond Tindel. Ms. Margaret Drower, epigrapher with the Mond Desert Expedition, graciously reminisced with us about her work on texts from the Wadi el-Hûl and offered much encouragement. Fuad Abd el-Wahab, a former workman with the Mond Desert Expedition in the 1930s, hiked with us in the gebel behind Armant and shared with us his knowledge of sites, sadly unpublished and now much plundered, on which he worked as a boy. Thanks go to Dr. Henri Riad, resident Egyptologist at Chicago House, for his continuing encouragement. Director Mohammed Saleh and Mlle. May Trad have helped us in searching through the records of the Cairo Museum. Dr. Ahmed Moussa and Dr. Yehia Eid were helpful during a visit to the beginning of the South Saqqara to Fayyum road. Special thanks to Tina Di Cerbo, Richard Jasnow, and the others who accompanied us on several of our desert trips, and who contributed to the recognition of important surface remains: Paul Bartko, Drew Baumann, and Nan and David Ray. The professional help of photographer Jerry Kobylecky was much appreciated. As always, many thanks go to Director Mark Easton, Assistant Directors Amira Khattab and Ibrahim Sadek, and all the staff at the American Research Center in Egypt, Cairo. The friendship of Peter and Ginny Manoogian will always be valued; we thank them for their generous hospitality in Cairo, a significant form of support for our work. The contributions of Di and Kelley Grodzins and Ms. Valerie Fargo are heartily appreciated.
For yet another year, the Nippur Expedition has not been able to resume its work at Nippur. The embargo of Iraq drags on, making the life of ordinary Iraqi people increasingly desperate, and, less importantly, also preventing our return, although the Iraqi Department of Antiquities would welcome us.

We were somewhat alarmed a couple of months ago when a German colleague reported that he had been told of illicit sales of Nippur objects by rug dealers in Diwaniyah, the closest large town to the site. One result of the embargo is a revival of illicit digging at archaeological sites on a scale that has not been seen since the Ottoman period. We hear reports of gunny sacks of cuneiform tablets being offered to antique dealers in Jordan. Much of the digging is being done by people who have lost their normal incomes as a result of the war or the embargo. They sell the objects for very little money to merchants who transfer them to antique dealers in Baghdad for a bit more money. Eventually, the items are smuggled out through Iran or Jordan for sale in the European, American, and Japanese markets. Thousands of newly excavated items are appearing in these markets alongside some of the three thousand antiquities that were looted from Iraq’s regional museums during the uprising after the Gulf War. In antique shops in Jordan and London, I was recently shown dozens of cylinder seals, cuneiform tablets, and other objects, including a (probably fake) head of Gudea, the ruler of Lagash. All these objects are stolen and any academic, collector, or museum buying them or aiding in the purchase is engaged in illegal acts, but the market is brisk and one or two of our British colleagues do not hesitate to translate and authenticate the tablets, the cylinder seals, and other objects, leaving their signatures on the papers of authentications with the dealers. Even in Britain, that is called abetting a felony as well as aiding in the violation of the economic boycott on Iraq since these objects are considered to be products from Iraq; you cannot buy even Iraqi dates right now without committing a crime. Usually, the antiquities dealers in Europe and the United States will furnish bogus papers that claim the objects have been outside Iraq (or Syria, Jordan) since the early 1970s. In some countries, that is important since such papers might show that the objects were in Europe or the United States before the signing of the UNESCO agreement on cultural property. But since it has not been legal to export any antiquity from Iraq since the 1930s, almost all Iraqi items on the market are still more likely than not to be stolen.

A friend in Baghdad has gone to Nippur and has examined the site thoroughly and says that the guard is in place and that there is no evidence of illegal digging. Perhaps someone has found things on the surface and has taken them to Diwaniyah, but more probably the dealers in Diwaniyah, knowing that something from Nippur would fetch a higher price, are selling things from other sites and claiming that they are from Nippur. My friend does report, however, that the expedition house at Nippur, which had not been robbed since the Gulf War, was entered a few months after.
ago and several important pieces of equipment were lost. Among the items were three typewriters, two surveying instruments, an electrical generator, and the kitchen stove and refrigerator. We can replace most things with a lot of trouble and expense, but the surveying instruments are a special case. These are so old that they are antiques, having been bought by James Henry Breasted in the first decade of this century. I am not absolutely sure how they got to Nippur, but I think they were in Egypt until the Abu Simbel project and were returned to Chicago in the late 1960s; they were then taken to Nippur for use there. We were intending to bring them back for deposit as antiquities in the Oriental Institute Museum.

While we hope for a lifting of the embargo on Iraq, and occasionally there seems to be some progress on that front, we carry on our work here in Chicago by writing up the final reports. During the summer of 1994, I will try to finish the volume on Area WG, the operation that was designed to gain information on the shift from the pre-Islamic to the Islamic period at Nippur. It is an important piece of work because there is no really good published sequence showing the archaeological correlates of this critical change in history. I have most parts of the report in manuscript, with only a chapter or two to finish. On other operations, I can report that Augusta McMahon has used material from her dissertation, devoted to Area WF, to write two articles on the Akkadian period and is still revising the entire dissertation for eventual publication in the Oriental Institute Publications series. James A. Armstrong has finished revisions of his volume on the first millennium at Nippur and that volume should appear in print in a year or so. He is spending the summer of 1994 in Ghent, Belgium, putting the final touches on the corpus of second millennium pottery that the Nippur Expedition has been involved in for more than five years. I am happy to note that Armstrong has been appointed to the position of Assistant Curator at the Harvard Semitic Museum. This position will involve him in field work as well as curatorial duties.

During the year, Nippur lost a devoted supporter with the death of Mrs. Carolyn Livingood. I remember vividly my first close contact with her, when she visited Nippur with her husband, Jack, in 1964. Her deeply-felt love of archaeology, her enthusiasm for Near Eastern civilization and for the Oriental Institute, and her advocacy for them were apparent even to a graduate student in his first field season. I know she felt a greater kinship with the ancient Egyptians, but she was able to feel almost as great a fondness for Sumer. She was instrumental in helping to set up the Friends of Nippur and her generosity was constant, even when the expedition could not go to the field. In an age of hype and hypocrisy, she was a genuine and honest friend.

I wish to close on a note of gratitude to all the Friends of Nippur who have continued to contribute to the Nippur project, even in its period of exile. These contributions make it possible to push ahead faster on the publications. It is the reports, after all, that stand as the permanent monuments of archaeological work. Without them, it is pointless to do the digging at all. When we are able to return to Nippur, we will be able to renew our work without so great a backlog of publications.
THE JOINT PREHISTORIC PROJECT
Robert J. Braidwood and Linda S. Braidwood

Again, the Prehistoric Project has no direct field activity to report. The senior field staff members—our colleagues Prof. Dr. Halet Çambel (Istanbul University) and Prof. Dr. Ing. Wulf Schirmer (Karlsruhe University), and we ourselves—were last together on the early village site of Çayönü in 1988. As explained in last year’s Annual Report, younger Istanbul University colleagues under Dr. Mehmet Özdoğan’s direction took over the excavations at Çayönü in 1989, joined shortly thereafter by a University of Rome team headed by Dr. Isabella Caneva. But by the end of the 1991 field season, the political situation in southeastern Turkey had become increasingly explosive to the point that there has been no fieldwork possible at Çayönü since then.

Before working in southeastern Turkey, the Prehistoric Project had profitably worked in northern Iraq, centering mainly on the site of Jarmo (but also unearthing extremely relevant earlier materials), until the monarchy fell and work there became impossible. A good season in Iran followed. By then, however, other colleagues—including two Chicago colleagues who had been with us in Iran excavating Sarab and Asiab—had decided on working in Iran. So when excavation in southeastern Turkey, the keystone of the area that interested us, became a possibility, we felt free to move in this direction.

And so it was that in 1963–64, great thanks to the help and complete participation of the wonderful one and only Halet Çambel, we began work in the eastern Taurus foothills of Turkey—indeed, in the headwaters of the Tigris River. Our Joint Prehistoric Project has happily and fruitfully continued over many field seasons.

Southeastern Turkey, together with fair sized portions of the Zagros mountain slopes in Iraq and Iran, is inhabited by people known as the Kurds. They speak an Indo-Aryan language. It is generally agreed that they were undoubtedly the people called the Kardouchoi, who even then (406 B.C.) caused Xenophon and his “Ten Thousand” great trouble. We have always liked the Kurds, but for the last dozen years or so the Zagros-eastern Taurus mountain slopes have become increasingly restless, and a relatively small group of militant Kurds, the PKK, have even made the area dangerous for outsiders. The decision to stop work at Çayönü in 1991 was actually made for us since the Istanbul University Prehistory Department lowered the boom on having its students and faculty go into southeastern Turkey.

We have a whimsical hunch that some newspaper columnist or television analyst will presently say that each place the Braidwoods went to excavate, revolution soon followed.

In our last report, we mentioned the necessity of re-roofing the expedition house. This will sound like a stuck record because we are still in much the same position we were a year ago. Can it be done or can it not be done? The man who was to tackle the re-roofing last year wants to try to get it done this June. Whether he can
do it without arousing the PKK Kurds to insist on a stiff financial cut for themselves remains to be seen.

Our ever present responsibility lies in the publication of the already excavated Çayönü materials—full description and interpretation of what we have found. Since the post-war years, as we have mentioned repeatedly, we have been seeking evidence as to how settled village-farming community life first began in the southwestern Asian instance.

Digging, of course, is only the beginning of the process. In addition to the artifacts, the actual things the villagers produced and made (not spectacular in this time range), we also seek carefully for non-artifactual evidence of their life. Such evidence includes the bones of animals used for food (some still wild, some on the threshold of domestication?, and some, domesticated); plant materials (for example, completely wild wheat or wheat on the way to full domestication?), and the like. By Turkish law, we may take the non-artifactual materials home or into Europe for study by experts, but not any of the artifactual materials. This means that all of the man-made objects recovered must get their full description and interpretation in Turkey.

Since it would be completely unrealistic to move some graduate students and ourselves to Turkey for the long time it takes to produce a final publication, the only other alternative was to aid our Istanbul University colleagues in training their own resident Turkish students for the job. Happily, in fair part thanks to the generosity of friends of the Prehistoric Project, this has been highly successful. In addition, foreign colleagues have also been most helpful.

A few words on the progress of the studies—Aslı Özdoğan and Erhan Biçakçı hope to finish their doctorates (in Istanbul University and Karlsruhe University, respectively) this summer/fall and will then be free to focus with Mike Davis on writing up the stratigraphy of the site. Over the years, our two biggest worries have been centered on achieving the study of the tremendous bulk of chipped stone at Çayönü, as well as the study of the animal bones.

In last year’s Annual Report, we mentioned the tremendous loss of Berrin Kuşatman, as a person and as a recognized scholar of ethno-zoology, who was working on the Çayönü animal bones. Thanks to Professor Richard Meadow of the Harvard Peabody Museum (a former student of Barbara Lawrence) who agreed to Barbara’s request to visit the University of Istanbul and consult with our colleagues on what to do about continuing the study of the animal bones, a solution will be forthcoming. Richard and his Japanese graduate student, Ms. Tonga, will be giving a working session this summer on excavated faunal material at a Japanese archaeological site in central Turkey. The two students who helped Berrin in the preliminary sorting of bones and are interested in continuing work in this field have been working hard at learning English so that they can attend the summer session. Then this fall when Miss Tonga finishes her doctorate at Harvard, she will go to Turkey to concentrate on the study of the Çayönü animal bones (with the two Turkish students assisting). This will probably be for a period of two years, at least. Richard has agreed to supervise, but Miss Tonga will definitely be in charge.

And, as to the chipped stone—the flint and obsidian artifacts—we are glad to report that Isabella Caneva has been able to continue her work on the Çayönü chipped stone (with some Italian funding for her research), despite the fact that she has not been able to return to her own site which is a short distance from Çayönü and a bit later in time. In addition to the two or three Italian specialists she
brings with her, she will also be assisted in preliminary sorting by two Turkish students, who—like the bone girls—with our support are also taking English lessons. We are most happy with Isabella's approach to the material and thankful that she has taken over the analysis.

And so the work continues on Çayönü despite the fact that all excavation, for the present, has come to a halt. We end this report with the thought that meaningful understandings of the past require far more than the excavation and recovery of "glitzy" artifacts or of spectacular settlements of the past. Our many thanks to all the good friends of the Prehistoric Project, who have so generously aided in the work at Çayönü.

MORE WALL PAINTING FRAGMENTS FROM TELL ES-SWEYHAT

Thomas A. Holland

Although the planned 1994 Tell es-Sweyhat expedition to Syria had to be canceled due to a lack of financial resources, work on previously excavated materials from the 1991 and 1992 seasons has steadily progressed and a final Oriental Institute report on these researches is anticipated during the forthcoming fiscal year.

The important Early Bronze Age wall paintings, dated to the middle of the third millennium B.C., were first discovered during the 1991 season of field work in Operation 5, Quadrant C, on the southern slope of the main mound. More wall painting fragments were excavated from the same area during the 1992 season and the wall from which they had fallen was further defined. Also, fragments of wall painting were recovered from another unexcavated wall belonging to the same building complex. However, due to the meticulous care which had to be taken in the time-consuming conservation procedures necessary to lift each fragment, further excavation of the building was not possible and portions of both wall paintings at present known still remain unexcavated. A brief report on the one hundred and three wall painting fragments so far excavated (the suckling calf fragment in particular) as well as a preliminary sketch plan of the excavation square containing the buttressed wall from which one of the wall paintings fell was first published in the 1991–1992 Annual Report, pp. 76–80, figures 2–5. Another preliminary assessment appeared in the American Journal of Archaeology (98 [1993]: 139–42) and other reports will appear in forthcoming issues of the Syrian Department of Antiquities Annual Report on Excavations in Syria as well as an entry in "Archäologische Forschungen in Syrien (5)," Archiv für Orientforschung 40.

This year's report presents ten of the one hundred and two unpublished wall painting fragments (figs. 2a–e, 3a–e), nine of which belong to a scene which was originally painted on the western side of Wall 21.2, to the north of buttress A, and one of seven fragments, WP.92.23 (fig. 2e), from an unexcavated wall in the south-
eastern quadrant of Operation 5, located somewhere to the south of buttress B (see sketch plan, fig. 3, in the 1991–1992 Annual Report).

The five-meter wide stratigraphic section shown in figure 1 depicts the northeastern side of the excavated portion of quadrant C of Operation 5. The 1.40 meter wide mudbrick wall from which the first wall painting fell in antiquity is shown partially excavated in the lower right-hand corner in Phase 6, the surviving top of which is located 2.60 meters below the topsoil of the mound, which represents Phase 1. When the modern excavation steps, constructed in the northwestern corner of the quadrant to give access to the early levels, were excavated during the 1992 season to further define the building, the remains of the southern end of a plastered structure (another possible buttress) was found 2.10 meters to the west of the western side of Wall 21.2 on floor 32.5 and in association with the same building in Phase 6. If this structure is another buttress, it may be connected to the unexcavated northern wall of this room of the wall-painted building. The remains of one other possible buttress was found on the western side of the quadrant, approximately due west of buttress A, with the remains of a plaster floor aligned northwest by southeast as is Wall 21.2, but if this was originally the western wall of the wall-painted building, it had been removed in antiquity to the level of floor 32.5.

Before describing in detail the individual wall painting fragments presented here, along with the comparative material at present known, it is appropriate to report the scientific analyses of the wall plaster upon which the two scenes were painted in red and black on a painted white ground. The examination of several small fragments was conducted by one of our conservators, Mark Fenn, who was then associated with the Smithsonian Conservation Analytical Laboratory and to whom we are grateful, along with Donna Strahan, for the Herculean efforts expended in conserving and lifting the wall painting fragments during the 1991 and
1992 seasons. Mr. Fenn’s technical report on the 1991 samples is presented below as it was submitted.

“Each piece examined consisted of one or more layers of a yellowish ground covered with a white layer which bears red and black pigments. One fragment of the red-painted plaster was examined by X-ray fluorescence (XRF) to determine the elemental composition of the paint and the white surface to which it was applied. Iron and calcium were found in relatively large amounts and minor amounts of strontium were also detected. A black-painted fragment was similarly tested and found to contain relatively large amounts of calcium and minor amounts of iron and strontium. X-ray diffraction (XRD) was then used to identify the crystalline species present in samples of each of the two pigments and the white ground layer. The white ground to which the paints were applied is calcite (CaCO₃); small amounts of strontium are frequently associated with calcite. The red sample contained hematite (Fe₂O₃, a common iron-based pigment) and calcite. The black sample contained only calcite, apparently from the white ground. The black pigment is some form of carbon, probably charcoal or bone black. This conclusion is based upon the fact that the element carbon is too light to be detected by XRF and the fact that neither charcoal nor bone black is crystalline, so neither would be detected by XRD. Other black pigments would have been detected by either XRF, XRD, or both. The small amount of iron detected by XRF in the black paint sample is probably contamination from the adjacent red-painted area of the fragment.”

All of the wall painting fragments illustrated in this report, except WP.92.23 (fig. 2e), come from the first painting found to the north of buttress A, designated hereafter as “Scene 1.” WP.92.23, along with six other unillustrated fragments from “Scene 2,” was recovered from the southern side of quadrant C, to the southwest of buttress B. Both wall paintings were made with the same black and red pigments on a white ground and also had some similarity of design in depicting stylized human figures and border elements. At present, the closest known wall painting parallels in the Near East for the Sweyhat examples come from two Early Bronze Age sites located to the southeast of Sweyhat on the left bank of the Euphrates River in northern Syria; they are Munbaqa, ca. twenty kilometers distant, and Halawa Mound B, ca. forty kilometers distant. As is shown below, the best comparisons for the Sweyhat paintings come from both a wall painting and a painted limestone stela from Tell Halawa B (fig. 4), Level 3, Period I, for which the excavators suggest a date in the first half of the third millennium B.C. (F. Luth, “Tell Halawa B,” Abb. 66, 67, in Halawa 1980–1986, edited by W. Orthmann, pp. 85–109. Saabrucker Beiträge zur Altertumskunde, Band 38, 1989). Some of the Sweyhat border elements are also similar to the “frame” surrounding the two stylized human figures in the Munbaqa (fig. 5) painting (“Ausgrabungen in Tall Munbaqa 1984,” by D. Machule et al. Mitteilungen der Deutschen Orient-Gesellschaft zu Berlin 118 [1986]: 67–145, Abb. 10).
The ten previously unpublished wall painting fragments from Sweyhat illustrated in this report are:

1. WP.91.7 (fig. 2a). From Scene 1. Human motif (found face up). Two adjoining fragments which were broken when they fell from the face of the mudbrick wall. The black-painted design on the right-hand side most likely represents an eye of a stylized human figure, which is encircled by a band with radiating “fingers” of paint, possibly meant to depict the eyelash; compare the large round-painted face on the limestone stela from Tell Halawa B (Luth 1989, Abb. 67). The fragmentary black-painted bands on the left-hand side of this Sweyhat fragment may be part of the hair of the head, similar to that depicted on the Halawa stela, or even some type of headaddress. S. Dunham, who recently discussed some wall painting fragments from Tell al-Raqa’i in the Habur valley of northeastern Syria, has drawn attention to the close similarity of the painted head on the Halawa B stela to a small terracotta head from Terqa (S. Dunham, “A Wall Painting from Tell al-Raqa’i,” *Levant* 25 [1993]: 135).

2. WP.92.73 (fig. 2b). From Scene 1. Human motif (found face up). The central, red-painted image represents the upper portion of a human figure with a “bird-like” head facing left. The wavy, black-painted bands emanating outwards from the area of the head probably depict the hair of the figure. This figure is well represented on the Halawa B wall painting (fig. 4) where similar human figures are situated in groups on both sides of a much larger central stylized face of a human, which is itself encircled by a wavy line pattern enclosed by wide bands of paint. The bird-headed figures on the left side of the Halawa central face have their heads pointed right in the direction of the central figure and those on the right have their heads pointed left, also facing the central figure, as is the position of the Sweyhat example.

3. WP.91.24 (fig. 2c). From Scene 1. Human motif (found at a forty-five degree angle, face up). The two red-painted figures positioned side-by-side on this fragment are depicted with upraised arms, in the same style as some of the Halawa figures. The head of the left figure has mostly flaked off and an adjoining fragment, which originally had the head of the right-hand figure, is either missing or not yet excavated; both heads were most likely also bird-like. The upper torsos appear to have been roughly triangular-shaped, with the apex of the triangle located in the waist area of the figures.

4. WP.91.5 (fig. 2d). From Scene 1. Human motif (found on its edge, facing east). This small fragment has a portion of a red-painted upper torso and black-painted lower torso of a human figure with the left arm upraised. The black paint used to decorate the lower torso may have indicated some particular form of garment; the two small protuberances on the top two sides of the “garment” may represent a drawstring or sash for securing the clothing. This particular fragment is of technical interest in that it shows a long perpendicular paint “drip-line” extending from the elbow of the upraised arm, which occurred during the original painting of the scene. Although not enough of the Sweyhat wall painting fragments have been excavated of either of the two scenes to begin a reconstruction of the motifs, both red and black drip-lines occur on a majority of the fragments and, therefore, are a vital clue to the original position of the individual fragments on the walls.
5. WP.92.23 (fig. 2e). From Scene 2 (found face down). Possible human motif with part of a border or frame design. The image on the right-hand side of this fragment is somewhat enigmatic, but may have represented the right-hand side of a bird-headed human figure although it appears to have two right arms, one of which seems to hold an unidentifiable object. The undulating black-painted bands on the left side of the fragment are similar to the border design which frames the two standing human figures depicted on the Munbaqa wall painting (see fig. 5, here; and Dunham, p. 136, for W. Pape’s suggestion that this type of frame might be a representation of reedwork, or as Dunham suggests, it might depict “a decorated curtain drawn open with tassels hanging across the top”).

6. WP.91.9 (fig. 3a). From Scene 1. Naturalistic motif (found face up). This is one of a number of fragments from Scene 1 that depicts either scrub or tree branches, which are painted red in the Sweyhat examples, the same as those depicted on the Halawa wall painting. These branches are held aloft in both hands of the stylized Halawa human figures. The fragment of black paint at the top center of this piece may represent part of a bird or animal similar to those shown in the branches at the top left-hand corner of the Halawa wall painting (fig. 4).

7. WP.91.25 (fig. 3b). From Scene 1. Border or frame motif (found at a thirty degree angle, face up, facing south). These two large adjoining fragments, ten by sixteen centimeters, may represent part of the wide circular-shaped band of decoration that originally enclosed a centrally-positioned human face similar to those faces on both the Halawa stela and wall painting. The “eye” fragment, WP.91.7, discussed above (fig. 2a), may be part of such a face painted as a central feature on the Sweyhat wall-painted Scene 1. The left, inner side, of these two pieces depict portions of two slightly wavy bands painted in black and red. The remaining bands on the border consist of a wide red band delineated on its outer circumference with a thinner black band; a six millimeter space is left in reserve and another red-painted band continues in a circular position, but the width of this band is unknown as both fragments are broken on their right edges.

8. WP.92.74a (fig. 3c). From Scene 1. Border or frame motif (found face up). This fragment may be similar to WP.91.25 discussed above, but there is an additional red-painted area on the inner circumference, which in the case of WP.91.25 may have flaked off as there is only a very small segment of plaster remaining on the inner circumference of that piece.

9. WP.92.74b (fig. 3d). From Scene 1. Border or frame motif (found face up). This piece was lifted in situ along with WP.92.74a discussed above and it initially seemed that it was part of the same motif. However, a closer inspection of the drawing reveals that the black wavy band is both wider and more spaced out than the similar band on WP.92.74a. Also, the red-painted band surrounding the black band is much more angular and more like a zig-zag pattern, while the similarly positioned band on WP.92.74a is more undulating.

10. WP.91.1 (fig. 3e). From Scene 1. Border or frame motif (found face down). This piece, along with other similar examples from Sweyhat, shows much more affinity to the Munbaqa wall painting than it does to the Halawa B wall painting. The design on this fairly large fragment is almost identical to the perpendicular borders (jambs) on the two sides of the Munbaqa frame enclosing the two central human figures. The position of the decorative motif on the Sweyhat fragment sug-
Figure 2. (a) WP.91.7, Scene 1: Human eye fragment; (b) WP.92.73, Scene 1: Human "bird-like" head fragment; (c) WP.91.24, Scene 1: Human torso fragment; (d) WP.91.5, Scene 1: Human torso fragment; (e) WP.92.23, Scene 2: Human and border fragment
Figure 3. (a) WP.91.9, Scene 1: Naturalistic, scrub or tree branch, fragment; (b) WP.91.25, Scene 1: Border fragment; (c) WP.92.74a, Scene 1: Border fragment; (d) WP.92.74b, Scene 1: Border fragment; (e) WP.91.1, Scene 1: Border fragment
suggests that it belonged to a similar type of jamb on the right-hand side of the original wall painting. Most of the background of the jamb is painted red with roughly shaped wedges alternately painted in black and red over a rectangular-shaped white background left in reserve. The two fragmentary black-painted bands on the far right side of this piece may be the remains of a loop-like pattern similar to that which encloses the whole frame of the Munbaqa wall painting.

Apart from the extreme rarity of wall paintings so far excavated in Near Eastern archaeological contexts, what is the importance of such paintings for our understanding of ancient history and the lives of the Early Bronze Age inhabitants? It is clear, even from the fragmentary scene depicted on a wall in room 313 at Halawa (fig. 4), that the centrally positioned large oval face is the key element in the painting, especially as the human figures are all shown facing this image with arms upraised and in some instances holding branches, possibly animals, and other indistinguishable objects in gestures of offering and adulation. The large stylized oval-shaped heads of the two human figures on the wall painting from room 3b at Munbaqa, as well as the similar head on the stone stela, indicate that all of these figures were special and were meant to be shown as “larger than life” beings. The archaeological contexts at Sweyhat, Halawa, and Munbaqa suggest that the wall paintings decorated walls in either temples or come from rooms closely associated with ritual practice. The depiction of a suckling calf on Scene 1 at Sweyhat (WP.92.38), a motif not known on any other wall paintings discussed here or found elsewhere in the Near East, further reinforces the evidence that a part of the subject matter of these wall paintings was to illustrate fertility in the eyes of the beholders and possibly to offer some form of obeisance to either political or religious beings.

The close similarity of the painted motifs, with the exception of the suckling calf, and the use of red and black paint on a white ground from Sweyhat, Halawa, and Munbaqa also suggest a single artist or a guild of artists versed in what was the acceptable figurative representations for public imagery for both political and
religious dissemination to the populace. That the three sites discussed here are approximately twenty kilometers equidistant from each other implies that these settlements served as spheres of influence, both politically and in the use of their respective landscapes. Thus all three sites with wall paintings in this area of the upper Euphrates River valley were most likely key administrative centers in a larger political entity that still remains unclear, primarily due to the lack of excavated cuneiform source materials. The small portion of the wall-painted building so far excavated at Sweyhat has certainly thrown considerable new light on the importance of the cult during the middle of the third millennium B.C. Future work in Operation 5 will greatly clarify the full extent of both known wall paintings and perhaps others as well as providing a complete plan of the architecture and related finds from what is almost certainly a temple and palace/administrative complex.
ORIENTAL INSTITUTE INVESTIGATIONS 
IN YEMEN 1994 
McGuire Gibson and T. J. Wilkinson 

Introduction 

With the aid of a grant from the National Science Foundation, a small team from the Oriental Institute, consisting of McGuire Gibson, T. J. Wilkinson, and Allen McCune, set out in March 1994 to study the archaeology of highland Yemen (map 1). Emphasis was placed on the study of the archaeological landscape and most specifically the development of the spectacular systems of ancient terraced fields that clothe the mountain slopes in this verdant part of southwestern Arabia (fig. 1). The objective of the new fieldwork was to build upon a pioneering environmental-archaeological survey initiated by McGuire Gibson in 1978 on the Dhamar Plain, a large agricultural area in the mountains about sixty miles south of Sanaa. The fieldwork at that time was carried out by field director Raymond Tindel and geomorphologist Stephen Lintner, who concentrated on the Himyarite capital of Zafar and its immediate vicinity in the southeastern part of the plain. As a result of this research, Tindel wrote a doctoral dissertation that offered a greatly improved chronological and artifactual base for the study of the Himyarite kingdom, which flourished from the second century B.C. until A.D. 525.

The 1994 team was able to take advantage not only of Tindel’s work but also of published archaeological surveys and excavations carried out in the 1980s by an Italian expedition in an area to the northeast of the Dhamar Plain. For preliminary study in Chicago we also had a set of aerial photographs and maps that had been purchased for the 1978 survey, as well as numerous technical reports on soils, hydrology, population dynamics, and other topics that had been done for agricultural development projects in the Dhamar Plain. Thus, when we arrived in Sanaa, we had already pinpointed several areas of the plain for special attention. We found easy access to extraordinarily good libraries in the Ministry of Agriculture and other resource collections in Sanaa. In the project area, we found other advantages that were not in existence in 1978. Now there were new or greatly improved roads that allowed much easier access to most parts of the survey area and we were able to cover a
Map 1. Location of research area in Yemen

great area in a short time. Thus, we could gain a much broader perspective on the development of archaeology and agriculture in highland Yemen than would have been possible fifteen years earlier. While in Sanaa we benefited considerably from the facilities of the American Institute for Yemeni Studies and its Resident Director David Warburton and from the efficient services of the General Organization for Antiquities, Monuments, and Manuscripts. We wish to acknowledge the encouragement and help of the General Organization, especially Dr. Muhammad Bafiqeh, Dr. Yusuf Abdullah, and Dr. Ahmed Bataya, who showed very obvious enthusiasm for a study of the Himyarite heartland.

Historically, the Himyarite kingdom appeared fairly suddenly, probably during the first or second centuries B.C. It has been suggested that this rise was approximately synchronous with the decline of the Sabaen kingdom along the desert fringes of northeastern Yemen and Hadhramaut, but to what extent the moist Yemen highlands were actually inhabited prior to the Himyarite state has remained a mystery. Although it is tempting to see the development of terraced agriculture
as being related to the rise of Himyar, without detailed archaeological evidence, such a scenario remains a theory based upon the largely negative evidence of the lack of South Arabian texts from the highlands before the first and second centuries B.C. Our objectives were therefore to make a general reconnaissance of the core area of ancient Himyar, the broad agricultural plain and the mountain valleys that surround Dhamar. In particular, we intended to examine the terraces with a view to dating them, and most important, to provide an archaeological and environmental framework within which to place the fields. The grant from the National Science Foundation (No. 10126-01-01) was under a program that explicitly provides funds for exploratory and “high risk” projects. Our timing was therefore impeccable, being at the onset of civil war. Our chosen field base, a house within the Seed Potato project in Dhamar, was equally appropriate for a high risk project, with its location between rival camps of southern and northern Yemeni battalions. Salvoes fired over us on two nights toward the end of our stay reminded us of the fragile political state of the country and made us aware of the necessity to be ready to evacuate at a moment’s notice. On the second occasion, the firing was mostly the celebration of a wedding, but the camps did join in for a few minutes. The amazing thing was that in the mornings after the events, the town was normal and the camps appeared to be operating as usual, with soldiers coming out to buy groceries, talking to the townspeople, and drinking tea. According to foreign radio reports that we listened to after the events, the town was supposed to be badly damaged and there were supposed to be tanks in the streets. There were, in fact, no casualties and no damage. We managed to complete our season before the full-scale outbreak of war, which occurred two weeks after our departure. It happened that one of the first events in the actual war was a battle at Dhamar, in which tanks of the southern battalion that had shot over us dashed around to the northwest and got close enough to the town of Mabar to damage a key electrical substation. The result was that not only was the Dhamar area blacked out, but Sanaa also was without electricity for several days.

Environmental Background

As part of the mountain area of Yemen, the Dhamar area receives the benefit of two monsoon seasons per year (March–April, July–September), accounting for the fact that much of this corner of the Arabian Peninsula is green and can even have lush vegetation. The rainfall through the millennia has resulted in deeply-cut valleys that can carry tremendous flash floods that must be controlled or at least partially diverted if the water and soil are not to be carried west to the Red Sea or dissipated upon the desert of the Empty Quarter to the east. The deeply dissected mountains, rising to a little over 3,000 meters, receive up to 700 millimeters of rainfall in the western part of the study area, falling to less than 200 millimeters in the valleys of the desert fringe in the northeast. In much of the area, unless the rains can be diverted and the moisture retained in the soil of the fields, agriculture is not possible. Clearly, there have been techniques for diverting and using the water for thousands of years in Yemen. These techniques have made it possible to sustain a remarkably high population density. In modern Yemen, density is frequently between 100 and 180 persons per square kilometer, which is one of the densest rural populations in the Middle East. It is to be expected that pressure on the land also would have been high in antiquity. Because the narrow valleys and steep slopes provide limited fertile soil, it can be expected that as the population
increased through time, terraces would be extended up the sides of mountains and encroach upon pre-existing sites. These sites would constantly be threatened with destruction or would be destined to be recycled into later occupations, as the present-day villages with their reuse of ancient blocks clearly show. But it is also expected that, in antiquity, newer terraces would encroach on and rework older terraces, just as terraces are being reworked today.

**Techniques and Field Problems**

Although forming a conspicuous element in the landscape of Yemen, the systems of terraced fields are remarkably little known. There is little published information on how terraces are constructed, how long it takes, how much labor is involved, and how long they last. We had estimates of a month to a year for the construction of a terrace but have concluded that normally a few men could construct a terraced field of half a hectare in about a month with traditional tools. Terraces are notoriously difficult to date and we felt that simply digging trenches through them would not necessarily provide the required dating evidence. Consequently our approach was to examine the entire archaeological landscape and also to conduct sample archaeological and environmental surveys, in order to provide an overall framework within which the terraces could be placed. Therefore, we examined terraced fields, ancient dams, ancient water conduits, archaeological sites, threshing floors, ancient roads, and sequences of natural sediments. Our approach, which entailed undertaking archaeological surveys of selected sample areas, was considerably aided by analysis of our aerial photographs and maps. The aerial photographs enabled us to make interpretative three-dimensional maps, which when combined with other data supplied by the published technical reports mentioned above, have provided a valuable database for archaeological research. Because the mountain areas of Yemen are extremely rugged, so that even four-wheeled vehicles cannot reach certain places, the aerial photographs gave us a means of estimating the probability of finding ancient remains, thus reducing somewhat the amount of territory that would have to be walked or climbed. While carrying out the field mapping program we asked about sites and discussed local settlement history with local people. We found the people to have a keen interest in the ancient past but a decided preference for Himyarite remains. Often, earlier sites that we came upon were not recognized by the local people as "ruins" or were not mentioned. We recorded photographically all inscriptions that we found, usually in secondary contexts such as the walls of present-day village houses (fig. 2). Ali Sanabani, the Dhamar area Antiquities Organization official, was an important member of the team partly because of his ability to read the inscriptions. But he was also an invaluable expert on the area because he had visited many sites as part of his university training and, more importantly, he had grown up here and could show us sites and faint rock inscriptions that he had found as a boy. It was also im-

**Figure 2. Ancient stones in modern walls**
portant that he was a member of an important tribe in the area and could gain us a friendly welcome in places where official papers might have been disregarded.

**Preliminary Field Results**

Although construction of terraced fields can result in the destruction of archaeological sites, the soils that accumulate behind the walls protect the underlying soils. As a result we were able to record numerous exposures of a dark organic soil that had apparently pre-dated the construction of terraced fields. This soil indicates that, before the creation of terraced agriculture, the mountain slopes were stabilized, probably with forest, the destruction of which ushered in a phase of soil erosion. The organic soil corresponds to a period of marsh development on the Dhamar plain dated to between 7,200 and 4,600 radiocarbon years ago (i.e., pre-Bronze Age). This is contemporaneous with the so-called Neolithic pluvial of southern Arabia, a period when the present monsoonal air circulation was strengthened and rainfall was increased over the southern half of the peninsula. Our observation of the extensive development of this moist and forested interval extends the record of this event into the moist Yemen highlands for the first time. The finding of obsidian flakes in one exposure of this organic soil makes it probable that, eventually, we will discover sites related to this moist phase in the Dhamar Plain.

Archaeological survey of selected sample areas demonstrated that settlement extended well back into pre-Himyarite times. Although the ancient pottery of the highland region remains little known, we managed to build up a skeleton chronology that we can bolster with a few radiocarbon dates expected to result from samples taken in key locations. But the ceramic chronology can be placed upon a firm foundation only by future excavation. We have tentatively dated a major site called Mihrab (Site 45) to the Bronze Age (third/early second millennium B.C.) and have evidence of a few minor settlements of the same time. Mihrab, in the northeastern part of the area, links up with similar sites recorded beyond our area by an Italian team during the early 1980s. Predictably, the Himyarite period, with its reddish pottery reminiscent of Roman wares, provided the largest number of sites (sixteen) but thirteen sites that we would date to late pre-Himyarite or Iron Age date (first millennium B.C.) suggest that occupation was significant even before the rise of the Himyarite state. Among the large number of Himyarite sites was Khirbet Maryah, some
Map 2. Site of Himyarite city, Khirbet Maryah, and its sustaining area
twenty kilometers west of Dhamar (map 2, fig. 3). This fifteen to twenty hectare
plateau-top town overlooked, on its eastern side, a broad plain that was partly irri-
gated by means of a major dam of the same date. Interestingly this dam, Sedd al-
Ajmar (fig. 4), like a second massive monumental dam at Adhra’a to the east of
Dhamar, had been breached by a major flood in antiquity. Both dams were con-
structed within relatively modest-sized, narrow valleys, but despite their size these
valleys generated sufficient flow to produce occasional massive floods. In contrast,
on the larger, more open valley below Zafar, which clearly once conducted large
flood flows, Himyarite dams were of modest height but remained unbreached (fig.
5). The need for only low dams, which were not breached, suggests that already
by the Himyarite period the landscape was sufficiently affected by terracing, which
would act to trap water on the slopes, that flood events were of modest scale and
controllable. In other words, in
some areas, terraced fields must
already have existed and were in-
tercepting rainwater and runoff
before the low dams were built.
The existence of terraces prior to
the Himyarite period is supported
by observations from other parts
of the study area where very ero-
ded and weathered terraces can
be observed adjacent to Bronze
Age and Iron Age sites, which
could not have been supported
except by these relic terraces.

Figure 5. Low dam of Sedd Majid al-Suflah, to the east of
Zafar
Although much more survey and excavation are necessary to support the above observations, the discovery of sixty-three sites in less than one month of field work in selected locations indicates that the area must have been densely settled back until at least the third millennium B.C. The dams, which probably numbered well over a hundred in the study area, appear mainly to have been constructed during the Himyarite period. Although they were designed to hold water only for short periods and are really to be classed as diversion devices, the dams did serve to raise the level of flow enough to supply fields at some distance downstream, thus expanding the agricultural base around important towns. The dams required high investments of labor and capital, which were presumably available and could be mobilized during the period when Zafar was the capital. However, as in modern Yemen, most people will have lived within small, dispersed villages, and again as today, terraced fields could have been constructed and managed by small household-size units, without recourse to dams. Presumably after the collapse of the Himyarite kingdom in the mid-sixth century A.D., the coordinated program of dams and the downstream system of fields that depended on them went out of use, to be replaced once again by simpler forms of terraced agriculture. This was, however, probably a gradual process, for a few of those dams remained in use as short-term reservoirs until recent times. In one location, a reservoir is even today deep enough to hold sufficient water for swimming during a short period each year; during the rest of the year, the reservoir is a pasture and a soccer field. In many cases, ancient dams are still being used, not as dams but as the retaining walls of large-scale terraces. The ancient sluices that funneled water from the reservoir through the dams in a controlled way and were often cut out of living rock at either end of the dams, have long ago been sealed, because now the purpose of the dams is to hold water only long enough to let it sink into the fields behind the dams rather than direct it into conduits for transport to fields downstream.

Even though dams have become only retaining walls for terraces, the continuity involved in the complex system of water control is emphasized by the fact that people in the Zafar area today know that these constructions were Himyarite and refer to them by names recorded in the tenth century by the Arab writer, Hamdani, who traveled through the region and said that the Himyarites had built eighty dams in the vicinity.

Conclusion

We are hoping that the political situation in Yemen will return to normal by the time of our next season of field work in the spring of 1995. The results of the past season were so encouraging that we are eager to resume the work. Since the season ended, we have been re-examining the aerial photographs with a greater confidence that we can spot ancient sites for future examination. The next season will entail not just a continuation of survey for sites, but the conducting of small excavations on specific ones that are thought will yield sequences of pottery. This work will establish a firmer chronology as well as add to the general database of Yemeni archaeology, which is still in its relative infancy.
Overleaf. Professor and Mrs. George Cameron working on a Greek inscription on the southern side of the Ka'bah-i-Zardusht. Naqsh-i-Rustam, Iran. 1938/39
THE CHICAGO ASSYRIAN DICTIONARY

Erica Reiner

Would you have thought that the Assyrian Dictionary Project would prove to be a magnet for undergraduates at the University of Chicago? We had our doubts in 1989 when we first listed the dictionary project with the College Research Opportunities Program (CROP), a program that allows undergraduates to assist with University of Chicago research projects. However, through the years we have had the valuable assistance of a number of motivated and able undergraduates. Nader Salti, our first CROP worker, was interested in having some experience that would set his medical school application apart from the rest; he was pleased that every medical school interviewer asked him about the Assyrian Dictionary, and he is now well launched into his career as a surgeon. As an undergraduate, Thomas Dousa wanted to spend more time around the Oriental Institute. Upon graduation, Thomas was awarded a Mellon Scholarship and is now completing his third year in graduate school in Egyptology in the Department of Near Eastern Languages and Civilizations and also works for the Oriental Institute’s Demotic Dictionary. Ever since the age of eight, Erin McKean had wanted to be a lexicographer. She volunteered her time at the Assyrian Dictionary office in academic years 1991-92 and 1992-93 so that she could gain lexicographical experience, and when she graduated, she had no trouble finding a job in the children’s dictionary division of Scott Foresman. Our most recent CROP student was Mark Miyake, who wanted to know how work on a major research project is done. We hope that his time with the dictionary project helps him in his later career, whatever that may be. We are also looking forward to working with Rachel Dahl, who will begin work in July 1994.

The constant infusion of young blood has helped us move the completion of the dictionary closer and closer. The R Volume absorbed most of the staff’s energy in the past year, and by the end of academic year 1994 it will be shipped off to the printer. Part III has been printed, and we await the arrival of the volumes so that the Oriental Institute Publications Office can begin distribution.

We were very pleased to finish the editorial work on the R Volume. The checking was completed in late winter 1994 and then the corrections and additions were transferred to the copy of the manuscript that we will send to the printer. The innocuous word “checking” covers the painstaking process of comparing every entry in the manuscript to the original cuneiform text, as it appears in hand copies in various publications; as yet unpublished texts must often be compared to the photograph of the tablet. This process is absolutely necessary because the manuscripts are based on file cards that have been prepared over a period of more than fifty years and are sometimes outdated. Checking requires not only an excellent knowledge of Akkadian but also great familiarity with the status of the field.

Seeing that new references are included in our card files is the responsibility of Professor Martha Roth. She reads material as it is published and adds new references to the files. New texts are being published constantly and the references need
to be collected for the current volumes we are working on, as well as for the previously published volumes in preparation for a future Supplement volume.

We are pleased to have again been joined by Mr. Remigius Jas of the Free University of Amsterdam. He arrived at the beginning of June 1994 and will spend a year working on the P Volume.

We would like to close with an update of the status of the remaining volumes for faithful readers of the Annual Report. Additional progress has been made on T and T. T is in first galleys. The galleys have been read and commented on by the resident Assyriologists and outside consultants and proofread by the editorial assistant and an outside proofreader. The comments and additions are read by the editor-in-charge and any corrections and additions are marked on a copy of the galleys that is sent to the printer. The P Volume, which was written and partially edited at an earlier time, will be the next volume to be edited. The editor-in-charge will start editing P in the summer of 1994. Most of the T Volume has been written. The U/W Volume is the only volume that still needs to be completely written and edited.

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DEMOTIC DICTIONARY PROJECT

Janet H. Johnson

When people think of ancient Egypt, they tend to think of temples and tombs decorated with hieroglyphs and of rich and powerful rulers controlling all aspects of the lives of their subjects. Since the draft manuscript that I have been checking this year included the letter \( P \), and since the letter \( P \) includes a word for king, I thought it might be interesting to think about the phrases and titles of officials that include this word for king. But first a short digression on the word itself. The normal word used in Demotic texts for “king” is \( Pr-\) (pronounced “per’o” or something similar), the source for our word pharaoh. The Egyptian term means, literally, “great house,” and was originally used of the king’s palace. It soon came to be used to refer to the king himself, much as the term “White House” can be used to refer to the President of the United States. Once the term came to mean “king” rather than “palace,” a new term was developed for palace: \( pr\ Pr-\), i.e., “house of pharaoh.”

The “house of pharaoh” was the place where many important government officials \( (shn.w\ Pr-) \) worked. Some officials included the word \( Pr-\) in their titles, where the term seems to correspond to the adjective “royal”; e.g., “royal agent \( (rt)\),” (a person who, among other things, “inspects ... the temples” on behalf of the central government) or “royal account scribe” and “royal audit scribe.” The seemingly more general title “royal scribe” corresponds to the Greek title \( \beta\sigma\sigma\ι\lambda\kappa\omicron\varsigma\ \gamma\rho\omicron\mu\iota\omicron\mu\iota\tau\epsilon\upsilon\varsigma, \) officials who are known to have had charge of the financial affairs of individual nomes. The title “royal farmer” indicated a farmer working state-owned land; there was some status involved in being a “royal” farmer and the state provided such farmers with special protection (against, e.g., impressment by corrupt local officials) in order to ensure that the farmers were available.
for the actual working of the land. The “house of pharaoh” or “estate of pharaoh” (the word pr frequently has this broader meaning) was thus a potential source of wealth or income for private individuals—both officials employed by the state and private individuals renting or leasing the state’s resources. Indeed, a private individual, when called upon to list potential sources of income, included “field, temple, town, (or) palace.”

When an object which can be possessed is qualified as “of pharaoh,” the term usually seems to correspond to our concept of “state” ownership: “state (owned) fields” (both h and sh.t), “state (owned) wheat,” “state tax” (i.e., taxes payable to the state in money), and “harvest (tax) of (i.e., due to) pharaoh.” But occasionally the term is indicating not possession but quality: e.g., the term “royal linen” indicates linen “fit for” the king.

Some words give indications of state actions and responsibilities: “royal road (myt) (a major public thoroughfare)” or “royal street (hr),” “oath (in the name) of Pharaoh,” “royal chancellery,” “royal treasury,” “royal granary/granaries” (to which taxes in kind owed the state were paid), “bank of pharaoh” (to which taxes in money were paid), and “royal auction.” Such auctions were very similar to modern government auctions of private land confiscated for nonpayment of taxes. Since the state wanted the land to be under cultivation, and thus producing taxes, it would confiscate abandoned land and auction it to the highest bidder. Privately owned land was normally kept in the family for generation after generation and only rarely put up for sale; thus, a person wishing to acquire land might find the “royal auction” the best way to do so. Both the state and the new owner benefited.

Using any one focus to look at Egypt (or at any other ancient or modern civilization) produces a distorted view, and this list of titles and other phrases including the term Pr- should serve only as an entertaining tantalizer hinting at the riches found in Demotic texts. But I hope it also suggests the range and variety of topics one encounters when writing a dictionary and why working on a dictionary project actually can be a lot of fun. The people having fun this year have included John Nolan, Thomas Dousa, and Alex O’Brien; they were involved in checking first drafts of letter files, in updating our appendix giving information about every text we cite in the dictionary, in incorporating Greek and Aramaic parallels (both vocabulary borrowed into Demotic from these two languages and geographical names which occur in both Demotic and, especially, Greek), and straightening out our extensive card files so that we, and our occasional and very welcome visitors, can find the information sought quickly.

I had the opportunity of giving a status report on the Demotic Dictionary at the Sixth International Congress of Demotists in Pisa in August. Everyone asks the same question I do—when will it be done? I wish I could give a firm (and close) answer! One demonstration at the meetings that I found especially interesting was the computerization of the Pisa collection of Demotic ostraca which several of the Italian students have undertaken, especially Sergio Volpi and Sonia Sanseverino. They have put together a “database” including all information about each of the hundreds of ostraca in the University of Pisa collection, including transliterations and translations of every text and a scan of each ostracon. The database allows researchers to search quickly to determine whether a given individual, object, vocabulary item, etc., is mentioned in more than one ostracon; this in turn allows for more efficient study and analysis of the ostraca and their implications. I was, of course, delighted to see that they were including scans of every ostracon, and I
was even more delighted when they offered to give the Demotic Dictionary a copy of all of their scans. These arrived in the fall, were "translated" from an IBM-PC format to Apple Macintosh format by John Sanders, Head of the Oriental Institute's Computer Laboratory, and I have already begun incorporating the Pisa scans into the dictionary. This generosity will save the Demotic Dictionary the large amount of time that it would have taken us to scan these hundreds of ostraca; even more importantly, it provides us scans from the original photographic negatives, rather than the lesser quality photographs that appeared in the various publications of these ostraca. This is a great boon for the dictionary and we are very appreciative of the work and generosity of the Italians.

THE HITTITE DICTIONARY PROJECT
Harry A. Hoffner, Jr.
Hans G. Güterbock

The sound of air you hear around the Hittite Dictionary office is not a rapidly deflating tire; it is the hiss of Š-words being edited. I will not say that we have totally finished with the P volume. That would be misleading. The final checking of proofs for P, fascicle 1 (pa–pap), is going on as I write. And we estimate that the rest of P will be produced during the summer and be completed sometime in November. But while our Research Associates Beal and Collins finish that, coeditors Hoffner and Güterbock continue to hack away at the first drafts of Š-words. We are about halfway through the Š-words now.

In the last Annual Report I regaled you with tales from the letter Š, among which were angry words such as ša-, šant-, and šawar, and with bright words like šakkt- "to know" and uptight words like šaklaš "law". Shall I continue? You cholesterol freaks—both anti- and pro-fat—might like to know we have finally discovered the Hittite word for vegetable oil. It is šaknas. If you pronounce the Hittite s like an English "sh" (which is how we think it was pronounced), this word sounds as mouth-watering as the item probably was. In a Hittite prayer uttered after offering to the gods a pastry loaded with sweet oil and a pitcher of cold beer, the worshiper says, "O gods, let your stomach be šaknawanza (filled with šaknaš) and your brain intoxicated with beer!" Sounds like it might have been fun to be a Hittite god, what?

Our P volume is being set up in-house by Thomas Urban of the Oriental Institute Publications Office. This both speeds up the production and keeps the costs down. It is hard to beat the convenience of just taking our queries down the hall instead of telephoning or sending a facsimile to Indiana, as we did with the previous volume.

The staff (Harry Hoffner, Hans Güterbock, Richard Beal, Billie Jean Collins), including volunteer Irv Diamond and part-time graduate student assistants Joe Baruffi and Scott Branting, has remained unchanged from last year. A new graduate student, Steve Thurston, will be helping us out in the summer of 1994.
Four members of the staff participated in a spring 1994 seminar led by Professor Gragg on the Hurrian language, which gave us all the confidence to tackle the new Hurrian-Hittite bilingual text recently published in hand copy. This has increased our ability to handle Hurrian loanwords and short Hurrian passages in Hittite texts. We are still waiting for the official edition of the bilingual, to be authored by Professor Neu of Bochum University, Germany. But now all four of us feel we are in a better position to understand it when it appears.

Although our current grant from the National Endowment for the Humanities expires in June 1995, we must submit our renewal application in early fall of 1994. This means that the summer months will be partly occupied with preparing that important document.

In the fall of 1994 the project will be visited by Professor Itamar Singer of the University of Tel Aviv, Israel. Singer will be on sabbatical and will use our files and advice to produce a study of an important Hittite royal prayer. (Not the one about the high-cholesterol pastry and beer!)
Overleaf. The staff servicing the balloon for lofting camera equipment to obtain aerial views of the site. Megiddo, Palestine. 1931
In 1993–94, Richard H. Beal spent much of his time performing the pressing task of checking the multitude of references that make up an article in the Chicago Hittite Dictionary against the original cuneiform copies, published editions, and commentaries. In addition to this reference checking, he was kept busy copy editing the first fascicle of the P-volume of the Hittite Dictionary, which is nearing completion.

Aside from work for the Hittite Dictionary, this year saw the appearance of his article, “Kurunta of Tarhuntassa and the Imperial Hittite Mausoleum,” in the journal Anatolian Studies 43. This article seeks to explain a paragraph in the newly found and published treaty between the Hittite Great King Tudhaliya IV and his cousin King Kurunta of Tarhuntassa, written on a tablet of bronze. Kurunta was a younger brother of Muršili III, a king from whom Tudhaliya’s father Ḫattušili III had usurped the throne with Kurunta’s help. Kurunta was rewarded with an appanage state based on his father’s new capital Tarhuntassa, which had been abandoned by royalty when the imperial capital was moved back to its traditional site at Ḫattuša. Since Kurunta had the superior claim to the great kingship, this was a dangerous move. The paragraph of the treaty in question concerns Ḫattušili III’s and Tudhaliya IV’s fears that should Kurunta have access to his father King Muwattali II’s mausoleum, which probably lay within his kingdom, any attempt in the future by Kurunta to seize the imperial throne would be thereby strengthened.

Richard delivered a lecture, “Hittite Oracles: Questions and Answers,” to a symposium, “Magic and Divination in the Ancient World,” held at Berkeley in February. A lengthened version of his paper was given to the Workshop on Ancient Societies here at the University of Chicago. (His wife and Oriental Institute alumna, JoAnn Scurlock, spoke at Berkeley on “Soul Emplacements in Ancient Mesopotamian Funerary Rituals.”) He also delivered a paper on the magic-rituals used by the Hittite army to ensure the loyalty of the men and the help of the gods, the latter rituals doing what we would call morale building. This paper was delivered to the Association of Ancient Historians meeting in Dayton in May. (JoAnn Scurlock spoke on “Neo-Assyrian Battle Tactics.”)

With his wife JoAnn Scurlock, he gave a slide lecture to the DePaul Geographical Society on Tunisia. Illustrated lectures—“The Islamic World,” “Ottomans in the Balkans,” and “Tradition and Modernization in the Islamic World”—were given to various classes of students at the University of Illinois at Chicago.

Vacation was spent photographing the portion of the Silk Road in China. We planned to meet up with and to travel with University of Chicago Turkology graduate student Marianne Kamp, who had spent the year doing dissertation research in Tashkent, Uzbekistan, and her new husband University of Pennsylvania Sinology
graduate student Michael Brose in Kashgar in Chinese Turkestan. This plan nearly collapsed when they found the border between Bishkek Kyrgyzistan and China closed to individuals. Only long delays, being put in with a "group" consisting of a convoy of newly purchased dump trucks, and arguments in three languages (Russian, Uighur, and Chinese) allowed them to make our rendezvous. Our slightly less difficult travels stretched from Tadjik speaking Tashkurgan and Uighur speaking Kashgar, through the Kazakhs of Heavenly Lake to the north of Urumqi, the Uighurs of Turpan (all in Chinese Turkistan also known as Xinjiang), and the Chinese of Dunhuang, the western end of the great wall at Jiayuguan, Tibetan Xiahe, Xi’an (the ancient Chinese capital with its terracotta armies), Datong, Hohhot, and back to Beijing. There we were taken good care of by Yang Zhi, a Ph.D. in Assyriology from the University of Chicago’s Department of Near Eastern Languages and Civilizations and her husband Yang Dawu (also known as graduate student David Jacobson), who now work as translators and have started their own business indexing (and translating upon request) Chinese journals and newspapers. Along the way we made special efforts to visit Chinese Moslem regions and districts, such as the Linxia region to the south of Lanzhou, the ancient Chinese style Great Mosque of Xi’an and the colorful Ox Street Mosque of Beijing. We hope that our slides will teach future generations of students about the culture of the Chinese majority, the Tibetan minority, as well as the virtually unknown Chinese and Turkish Moslems who live within the borders of the modern People’s Republic of China.

Lanny Bell continued to communicate the excitement of archaeology and ancient Egyptian culture to diverse public audiences, with lectures for the Archaeological Institute of America in Fresno, San Diego, Orange County, Santa Fe, and Detroit (co-sponsored by the Detroit Institute of Arts); the School of Social Sciences at California State University in Fresno; the Museum of Man in San Diego; the Classical Art Society of the Art Institute of Chicago; the Brooklyn Museum (at a symposium co-sponsored by the American Research Center in Egypt; Bell’s presentation on “Mythology and Iconography of Divine Kingship in Ancient Egypt” is summarized in detail by David Moyer in KMT: A Modern Journal of Ancient Egypt, vol. 5.2, Summer 1994, pp. 64, 78-79); the College of William and Mary in Williamsburg; Millikin University in Decatur; the Honors Program of Daley College in Chicago; the annual meeting of the Illinois Council on the Teaching of Foreign Languages and the Illinois Classical Conference (held in Peoria); and the Catherine L. Hatcher Memorial Seminar at the Morris, Illinois, Library.

Lanny was elected to the Executive Board of the Classical Art Society of the Art Institute of Chicago; and he was re-elected President of the Chicago Society of the Archaeological Institute of America. He served as delegate for the Archaeological Institute of America at the inauguration of Hugo Sonnenschein as President of the University of Chicago, and he delivered the opening words at the symposium “Archaeology for the 1990s and Beyond” co-sponsored by the Oriental Institute and the Chicago Society of the Archaeological Institute of America. He also spoke for a January Oriental Institute Docent Day (a joint meeting with the
Robert Biggs

Robert Biggs has continued to emphasize ancient medicine, mainly Babylonian, in his research. He has completed a paper, "Conception, Contraception, and Abortion in Ancient Mesopotamia," in which he adduces evidence that suggests that there may have been a belief in ancient Mesopotamia (as there was among some Greek thinkers) that children were solely the offspring of their fathers, that is, that the mother's role was to provide a receptacle for the implantation of the man's seed and to bring the resulting child into the world. The paper includes discussion of possible contraceptive strategies (including breast-feeding) and use of plant products that inhibit contraception or induce abortion. He will also be contributing translations of Babylonian medical texts to a volume, The Context of Scripture, being edited by W. W. Hallo. Still in the realm of medicine, he has continued as Contributing Editor (for ancient Western Asia) for Society of Ancient Medicine Review. Other activities include preparation of Pre-Sargonic and Old Akkadian texts for Augusta McMahon's volume tentatively entitled The Early Dynastic-Akkadian Transition: The Evidence from Nippur (these are texts from the seventeenth and eighteenth seasons of excavations at Nippur).
J. A. Brinkman

During the academic year 1993–94, John Brinkman presented three papers at professional gatherings: “Science and Law in Babylonia” in a lecture series at Millikin University (September 1993), “Babylonian Geography in the Early Iron Age” at an international conference on the Geography of the Neo-Assyrian Empire (University of Rome, November 1993), and “Continuity and Discontinuity in Babylonian Civilization” at the national meeting of the American Oriental Society (University of Wisconsin, Madison, March 1994). He published two short texts: a fourteenth-century Babylonian seal of a royal official listing a four-generation genealogy that includes a governor of Dilmun (indicating Babylonian presence on the island of Bahrein or the adjacent Arabian coast in the late fifteenth century B.C.); and a short cylinder inscription of Esarhaddon (king of Assyria, 680–669 B.C.) that supplies the previously unknown beginning of a building inscription from Nippur. He also contributed an article as part of the collaborative first publication of four Neo-Assyrian texts found during recent German excavations at Sheikh Hamad on the Habur River in eastern Syria; these are the latest known texts written in Neo-Assyrian and the first dated documents in the language which come from after the fall of Nineveh in 612 B.C. and the subsequent collapse of the Neo-Assyrian empire. The texts, four land sales, follow Neo-Assyrian scribal conventions, but date from the second and fifth years of the Babylonian king Nebuchadnezzar II (i.e., 603 and 600 B.C.). Mr. Brinkman also conducted archival research in England in June–July 1993 at the British Museum in London and at the Bodleian Library and Ashmolean Museum in Oxford.

Miguel Civil

Besides the unglamorous job of compiling the hypertext corpus of lexical and literary Sumerian texts, Miguel Civil has been working on a book, a commented critical edition of the “Farmer’s Instructions,” scheduled to appear at the end of June. This text is a eighteenth century B.C. manual, written in Sumerian, on how to cultivate barley. It is a difficult text with technical information of great interest for the history of agriculture, and Civil’s is the first complete edition. He has also in press a study entitled “From the Epistolary of the Edubba” with editions of letters of teachers of ancient Mesopotamian schools. In the American Oriental Society Annual Meeting in Madison, Wisconsin, he read a paper on some archaic Semitic loanwords in Sumerian of a type so far unrecognized. He has finished two other papers, one on “Reed Fences and Apple Trees” for the Rencontre Assyriologique Internationale in Berlin, another on the middle voice of the Sumerian verb for a meeting in Munich. The usual encyclopedia articles and minor contributions also took some of his time. Last summer he collated some lexical tablets from Emar in Aleppo (Syria) and in December gave a short seminar on Sumerian phonology at the Oriental Institute of the University of Barcelona.
Billie Jean Collins

With one fascicle of the new volume in press and the rest soon to follow, work on the second volume of the Chicago Hittite Dictionary, words beginning with P, is coming to completion. Billie Jean Collins’ time will then be freed up to contribute new articles for the forthcoming S-volume of the Hittite Dictionary.

In addition, Dr. Collins continued to pursue her interest in comparative religion by presenting a paper in March at the American Oriental Society Meeting in Madison, Wisconsin. The paper, entitled “Some Common Features of Hittite and Greek Animal Sacrifice,” will soon be submitted for publication. She also wrote a paper, “Her Limbs are Good: Conceptions of the Human Body in Hittite Anatolia,” for inclusion in a book entitled Materials for the History of the Human Body in the Ancient Near East, edited by Charles Jones and Terry Wilfong, and is currently working on translations of a number of Hittite ritual and omen texts to be included in a three volume work entitled The Context of Scripture, edited by W. W. Hallo.

Much of Dr. Collins’ year was taken up by teaching responsibilities. She co-taught the Department of Near Eastern Languages and Civilizations course in Ancient Near Eastern History, covering the Anatolian History section in both the fall and winter quarters. Also in the fall, she taught a member’s course, Cuneiform-by-Mail, for the Museum Education Program. In the spring she taught “The Religions of the Ancient Near East and Pre-classical Mediterranean Worlds” at Columbia College in Crystal Lake, Illinois.

The Newsletter for Anatolian Studies, which Dr. Collins edits, continues to prosper. The second fascicle of volume 9 appeared in December. The visibility that electronic mail provides has caused circulation to continue to increase at a rapid pace in 1993-1994.

John Coleman Darnell

In addition to his work as epigrapher with the Epigraphic Survey in Luxor, Egypt, and work (with his wife Deborah Darnell) on the Luxor-Farshut Desert Road Survey (see full report earlier in this publication), John Coleman Darnell’s personal research in 1993-1994 has been concerned with cryptography and graffiti. In addition to polishing up his dissertation, dealing with three versions of a cryptographic religious treatise of the New Kingdom, he is completing a study of two enigmatic texts from Dra Abu el-Naga, recently discovered by Karl-Joachim Seyfried and Friederike Kampp. He is in the preliminary stages of an examination of two cryptographic ostraca which Jiro Kondo and his Waseda University team unearthed this past season in debris near the entrance to the tomb of Amenhotep III. He has also begun work on yet another fragment of cryptic text from Dra Abu el-Naga, a portion of a solar hymn, long exposed but essentially ignored. In addition to the vast amount of pharaonic graffiti which with his wife he is recording in the Wadi el-Hōl and near the Gebel Antef temple, Mr. Darnell is also working on the copious graffiti from the monastery of Poseidonios/the topos of Apa Tyranos in the desert behind Armant (for the demotic texts here, see Richard Jasnow’s account of his personal research in this report). The site, which Oliver H. Myers located in the 1930s, has never been fully published (only about six photographs have appeared) and has recently been heavily vandalized. There are mysterious early dynastic
serekhs, depictions of caravans of loaded donkeys, and Coptic inscriptions recording the dates of Easter pilgrimages. There is also a lively depiction of a Coptic visitor being winched up to the top of the doorless monastery tower in a chair (the name of the establishment appears in the pediment as "Poseid[onios]"). Deborah and John hope soon to produce an architectural and ceramic study of the site as well.

Fred M. Donner

Fred M. Donner was pleased to see the appearance of two articles, both long delayed in publication; by chance, both also represent byways in his research. "Mesopotamian Trade from the Tenth to the Fifteenth Centuries C.E.,” originally written several years ago on invitation for an East German scholarly journal that went under with East Germany, finally appeared in Asien Afrika Lateinamerika 20 (1993): 1095-1112. “The Colloquial Arabic Dialects and the Importance of Studying Them” was published in the American University of Beirut’s journal Al-Abhath 41 (1993): 3-26 [Arabic section], after having languished for several years in the clutches of another publisher.

Most of Donner’s research time this year has been devoted to clarifying the origins of Islam and the early Islamic state, a subject in which he has a long-standing interest. His article, “The Growth of Military Institutions in the Early Caliphate and Their Relations to Civilian Authority,” appeared in Al-Qantara (Madrid) 14 (1993), 311-26. In May, he attended the fourth Late Antiquity and Early Islam workshop, sponsored by The Wellcome Institute for the History of Medicine and University College London, where he presented a paper entitled “From Believers to Muslims,” which will be published in the proceedings of the workshop. In this paper, Donner presented the thesis that the prophet Muhammad’s followers in Medina initially thought of themselves as a community of Believers (Arabic mu’minun) in God’s oneness and in the imminence of the Day of Judgment, and that this early community was open to Jews and Christians who shared these beliefs. The crystallization of a distinct religious identity as Muslims—separate, confessionally, from Jews, Christians, and other monotheists—seems to have taken place only in the second half of the first century after the prophet, that is, toward the end of the seventh century C.E. This interpretation remains in many ways hypothetical, but it appears to be supported by a variety of evidence, including some passages of the Qur’án and the testimony of the earliest Christian sources in Syriac. Donner continues work on this theme and on the closely related issue of early Islamic historiography, about which he hopes to complete a monograph in the near future. He enjoyed being active this year in the workshop in Middle Eastern urbanism organized with his Oriental Institute colleagues Dr. Donald Whitcomb and Tony Wilkinson.

Besides his research, Donner has been heavily engaged in teaching and in administrative duties for the Oriental Institute, the Department of Near Eastern Languages and Civilizations, and the Center for Middle Eastern Studies, as well as for several scholarly organizations. As coordinator of the University of Chicago-University of Damascus Affiliation program (which expired this year), he organized the visit of the last visitor to Chicago, Prof. Najah Muhammad of the University of
Damascus History Department, a specialist in the modern history of Syria. He has continued to serve as a member of the Board of Directors of the Middle East Studies Association of North America and as President of Middle East Medievalists. He also continues to edit Middle East Medievalists’ semiannual Bulletin, Al-‘Usur al-Wusta.

Peter F. Dorman

In addition to the editorial responsibilities involved in the somewhat complicated publication of the Epigraphic Survey’s first documentary folio on Luxor Temple, Reliefs and Inscriptions at Luxor Temple, Vol. 1: The Festival Procession of Opet in the Colonnade Hall, as well as the publication of the registry of the photographic archives of Chicago House (see separate report), Peter Dorman prepared an article for publication on the topic of “Two Tombs and One Owner,” a paper delivered last year at Heidelberg University; it was expected to appear in June 1993. Three other articles were published during the last year as well: “Senmout, un homme d’état hors de commun,” an account of the life of Senenmut, intended for a general readership, in Dossiers d’archéologie et d’histoire N° 187 (November 1993): 110–15; a book review of the catalogue to the recent exhibit of art from the reign of Amenhotep III, Egypt’s Dazzling Sun: Amenhotep III and His World, in American Journal of Archaeology 98 (1994): 360–62; and a study of a little-attested ritual meal, “A Note on the Royal Repast at the Jubilee of Amenhotep III,” in Hommages à Jean Leclant, presented to Prof. Leclant in June 1993.

Dorman was also invited to participate in a symposium organized by the University of California at Los Angeles, on the theme of “The Splendor of Ancient Thebes,” held on April 23, 1994. He summarized the ritual purposes and interconnections of Karnak, Luxor Temple, and the small temple of Medinet Habu in a lecture entitled “Temples of the Dead and Living Gods.” Among numerous informal lectures given this year on the Epigraphic Survey’s work at Luxor Temple and Medinet Habu, Dorman gave an account of the last two field seasons to the South Side Suburban Archaeological Society in July 1993 and to an invited audience at the American Embassy in Cairo. He also gave a seminar on the subject, “The High Priests of Amun during the Reign of Thutmose III,” at the American Research Center in Cairo in November 1993.

Walter Farber

Walter Farber spent most of his time working on the planned new edition of the Lamastu series. As a result of this, only few other manuscripts of his went to press this year. These included the publication and study (co-authored with Gertrud Farber) of some Ur III tablets in a private collection in Germany and a couple of book reviews. He has high hopes to finish the Lamastu book within a year, and then be free to get back to several unfinished manuscripts currently sleeping in his desk drawers.
**McGuire Gibson**

In addition to his normal work on Nippur and his field work in Yemen, McGuire Gibson has been cooperating with Dr. Augusta McMahon and a group of graduate students on a compilation of a catalogue of the small objects from the Diyala Region. The aim of the work is the eventual publication of a set of volumes devoted to this material. The late Prof. Helene Kantor had prepared three chapters on some of the objects, and these will be incorporated into the publications. The small objects are the only category of material yet to be published from the Oriental Institute’s important 1930s excavations in the Diyala area, located to the east of Baghdad. There are thousands of these objects and the work will, therefore, take several years to complete, but the rewards will be great. These objects, often in themselves of art-historical interest, also give critical information for dating, and when combined with all other finds in a room, can give evidence on the function of that space. Gibson and Dr. McMahon are preparing grant applications to aid in the preparation of manuscripts of these volumes.

In March, he traveled to Lyon, France, for the final working session on a corpus of second millennium pottery. The corpus, originally a cooperation between the Oriental Institute and the University of Ghent, now includes archaeologists from several countries and will be the definitive word on the subject for some years to come.

He has also spent part of the year in revising articles on the origins of Mesopotamian civilization and on seal style of the Parthian period that are being published in Japan and Italy.

He continues to serve as the President of the American Institute for Yemeni Studies. As President of the American Association for Research in Baghdad, he helps to keep alive the expectation that scholars will return to work in Iraq. He still serves as a member of the Board of the Council of American Overseas Research Centers.

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**Gene Gragg**

Gene Gragg presented a paper, “Phonology, Comparative Method, and Etymological Databases,” at the Third International Symposium on Cushitic and Omotic Languages held in Berlin March 17–19. He was able to bring along for demonstration purposes a “traveling edition” of the Cushitic-Omotic Etymological Database CUSHLEX, a computerized tool for investigation into the historical relationships of the vocabulary of the Cushitic and Omotic branches of the Afroasiatic super-family of languages—implemented now for a Windows environment with the widely-used database managing system Foxpro. Work this year has centered on using the database’s cognate sets to infer and register the correspondence sets and sound changes (“sound laws”), which recapitulate the historical evolution of the language family.

Individuals from a number of institutions in the United States and Europe have expressed interest in using the system both as a reference tool and in the context of on-going linguistic fieldwork (specifically the southern-most extension of Cushitic in Tanzania). A project of similar nature in Berkeley and Lyons, covering the hundreds of Bantu languages in Africa, had independently set similar goals.
(updatable multi-user, multi-platform electronic etymological database) and means (commercially available micro-computer-accessible database managing system), and are investigating how much of the architecture and programs of CUSHLEX can be adapted to their situation. A "user’s manual" for the CUSHLEX has been available on the Internet for most of this year via the Oriental Institute’s new file transfer (FTP) site (see Computer Laboratory report, below), and recently instructions have been posted on how to obtain the source code, data, and executable file for the most recent version.

Harry A. Hoffner, Jr.

Once again, in 1993–94 Harry Hoffner used the majority of his research time for the directing and editing of the Hittite Dictionary of the Oriental Institute of the University of Chicago. In addition to teaching and committee work, he also traveled, lectured, and authored several articles and a book.

In late May and early June he accompanied a tour of Israel, the Greek islands of Crete, Mykonos, and Rhodes, and the Turkish coast (Izmir and Ephesus), lecturing about the Hittites on board a Greek liner. In late June he flew back to Europe to participate in the Second International Congress of Hittitology, held in Pavia, Italy, where he lectured on aspects of Hittite grammar. From Italy he traveled in early July northward to Leiden, The Netherlands, to give a paper at the International Convention of Assyriologists (Rencontre Assyriologique Internationale). In March 1994 he gave a paper at the annual meeting of the American Oriental Society in Madison, Wisconsin. During the winter he acted as academic host for a post-doctoral research scholar from Armenia, Dr. Hripsime Haroutunian, who wished to use the Hittite Dictionary Project files and the advice of our staff for the preparation of a scholarly edition of a Hittite ritual text.


In addition Hoffner, together with volunteers Irv Diamond, Irene Glassner, Kathleen Mineck, and Denise Paul, is assisting emeritus Professor Hans Güterbock in the publication of a volume of his collected essays. Hoffner and Diamond are working together with Güterbock on the editing of the work, while the other three volunteers have generously given of their time to proofreading. It will be published sometime in the coming year by the Oriental Institute.
Thomas A. Holland

Thomas A. Holland continued his work, as an Oriental Institute Research Associate, on the study of the archaeological material excavated at Tell es-Sweyhat in Syria for final publication. This included the sending of a representative collection of metal object fragments from the site to the Smithsonian Analytical Laboratory for analyses, the results of which are awaited with great anticipation as new information may be forthcoming on the sources of the raw materials as well as providing evidence for the Early Bronze Age trade routes in the upper Euphrates River valley.

The Early Bronze Age modeled clay figurine representing a domesticated horse (stallion), which was excavated at Sweyhat during the 1992 season, continued to spur interest in both the academic and popular presses during the year, thus bringing welcome publicity for the Oriental Institute’s field research program abroad. This continuing interest involved giving telephone interviews and providing text and photographic views of the horse for the following publications: Biblical Archaeology Review 19:4 (July/August 1993): 16; POA (The Official Publication of the Pony of the Americas Club), vol. 39:4 (April 1994): 86; The Chicago Maroon 105:28 (January 7, 1994): 6; The University of Chicago 1992–93 Annual Report, pp. 22–23; and the Encyclopaedia Britannica Annual Year Book for 1993.

One of the three articles written last year, which was concerned with the archaeological finds from Sweyhat, was published in the American Journal of Archaeology 98:1 (1994): 139–42 in the section “Archaeology in Syria,” edited by H. Weiss. A more detailed account of the wall painting fragments, which were excavated during both the 1991 and 1992 seasons, appears (above) in this year’s Annual Report.

Toward the end of April, Holland was the host for Dr. Sultan Muhesen, Professor of Prehistoric Studies at the University of Damascus and the newly appointed Director of Antiquities and Museums of the Syrian Arab Republic, during his five-day visit to the Oriental Institute. Dr. Muhesen is an international scholar who is well known for his research and studies of prehistoric Syria and the Levant in general; he presented a lecture on his archaeological field work for faculty, staff, and students of the Oriental Institute and also gave a brief presentation at the weekly social hour, sponsored by the Department of Near Eastern Languages and Civilizations, on the archaeology of Syria, which was followed by an informal discussion. We benefited greatly from Dr. Muhesen’s visit and were especially honored that he chose to include Chicago in his itinerary both to discuss his projects and to visit with his friends.

Richard Jasnow

In Luxor Richard Jasnow’s personal research focused on the final checking of the Hawara Demotic papyri manuscript. Now that his study of the Hawara documents is drawing to an end, he has also begun work on a joint project with Professor Karl-Theodor Zauzich of the University of Würzburg. Some years ago Professor Zauzich discovered a papyrus in the Berlin Museum, which he identified as the “Book of Thoth.” The papyrus had been seen by Egyptologists around the turn of the century, but trace of it was lost. Jasnow accepted Professor Zauzich’s kind offer of
collaboration and they commenced to edit this rather mysterious composition. The designation “Book of Thoth” was given to the papyrus by those earlier Egyptologists, and in so far as they can judge, it is a perfectly suitable title. Dr. Jasnow and Prof. Zauzich have since identified further versions or copies of this text in the collections of Vienna, Paris, and Copenhagen. Thanks to a grant from the Deutsche Forschungsgemeinschaft they were able this past spring to go to the Louvre to study one of the relevant papyri. The “Book of Thoth” promises to keep him occupied for the next few years. During this last field season at Chicago House, he also benefited from the Luxor-Farshût Desert Road Survey Project of John and Deborah Darnell, who found in the Gebel to the west of Arman, a few miles to the south of Luxor, several Demotic graffiti. These well-preserved inscriptions can be precisely dated to the reign of Darius the Great. Richard and his wife, Christina Di Cerbo, have copied the graffiti and hope to publish the texts in Enchoria.

Janet H. Johnson

During the past year, Janet H. Johnson went to Copenhagen for the annual meeting of the International Committee for the Publication of the Carlsberg Papyri and then traveled to Pisa for the 6th International Congress of Demotists, where she gave a report on the Demotic Dictionary (see separate report) and chaired the session of the meetings devoted to discussions on language and literature. From late November until early January, she participated in the Aqaba Excavations (see separate report). She served this year as President of the American Research Center in Egypt, which has just finished extensive renovations of its new and enlarged headquarters in Cairo and which is beginning to serve as the “umbrella” organization sponsoring and supervising preservation and restoration work on Egyptian monuments in conjunction with the Supreme Council of Antiquities (formerly the Egyptian Antiquities Organization) and funded through the United States Agency for International Development. Johnson served on the James Henry Breasted Prize Committee of the American Historical Association. She gave a lecture, “Prophecy in Late Period Egypt,” to the Workshop on Ancient Societies at the University of Chicago and prepared a series of lectures on Egyptian astronomy for the Space Explorers Program that is run through the University of Chicago’s Office of Special Programs (and coordinated, in this case, through the Oriental Institute’s Education Office). Her article on “Annuity Contracts’ and Marriage” appeared in the memorial volume published by the Oriental Institute in honor of Klaus Baer and her remarks on “Computers, Graphics, and Papyrology” appeared in the Proceedings of the 20th International Congress of Papyrologists held in Copenhagen in 1992.

W. Raymond Johnson

Research Associate W. Raymond Johnson celebrates his fifteenth season with the Epigraphic Survey this year. This past winter in his capacity as Senior Artist he helped oversee the successful completion of the artwork for the Epigraphic Survey’s second volume in their Luxor Temple series, Reliefs and Inscriptions at Luxor Temple, Volume 2. In June he supervised the long-awaited printing of Reliefs
and Inscriptions at Luxor Temple, Volume I: The Festival Procession of Opet in the Colonnade Hall at the Hennegan printers in Cincinnati. This is a landmark year, marking not only the publication of the Opet volume, but also the *Forts of Pemaquid, Maine: An Archaeological and Historical Study*, for which Ray contributed the pottery and object drawings almost a decade ago.

Ray was a featured speaker at the Metropolitan Museum of Art’s Symposium on Amarna and Post-Amarna Art last June where he presented a paper entitled “Amenhotep III at Amarna: Some New Considerations.” This September he will be speaking at Johns Hopkins University in Baltimore on the same subject. Recently he has been working on the problem of some unusual sculpture produced during the last decade of Amenhotep III’s reign and last fall successfully joined a head belonging to this category excavated by the Oriental Institute at Medinet Habu to one of two “fat” bodies of Amenhotep III found in his mortuary temple. This summer, in addition to his work for the Epigraphic Survey, Ray is writing book reviews, working up his Met lecture for the Journal of Egyptian Archaeology, and preparing his thesis for publication. He is continuing his ongoing research on the portraiture of late-Eighteenth Dynasty kings, the study and documentation of talatat blocks of Akhenaten from Karnak that were reused by Tutankhamun, Ay, Horemheb, and Ramses II, and he continues to ink the final drawings of Akhenaten’s Re-Horakhty blocks at Karnak.

Mark Lehner was on leave from the University of Chicago for the academic year 1992–93 in order to catch up on reading, filing, analyzing, and publishing material from his work at Giza going back to the American Research Center in Egypt Sphinx Project that began in 1979. During this year of leave he was a Visiting Scholar with the Department of Near Eastern Languages and Civilizations at Harvard University. His three principal writing projects included *The Archaeology of an Image: The Great Sphinx of Giza* for publication by the University of Chicago Press; a book about the Egyptian pyramids for publication by Thames and Hudson; and *Giza Reports* for publication by the Oriental Institute.

In September 1993 National Geographic financed the reconstruction of a bakery in Egypt like those discovered in the last season of excavation at Giza. Results of the experimental baking will be published in an article for which he is co-author with Ed Wood, the specialist in yeast and sourdough bread for the project. Mark returned to Egypt in May to begin to prepare for the 1994–95 season of the Koch-Ludwig Giza Plateau Project and visited with Dr. Zahi Hawass, Director General for Giza and Saqqara, shortly after his reappointment to that position.

On April 10 he delivered a lecture, sponsored by the Harvard Semitic Museum and the Peabody Museum, about the excavations at Giza. The lecture was followed by a preview of the exhibit, “The Sphinx and Pyramids: 100 Years of American Archaeology at Giza,” for which he is curator. Scheduled to open November 1, 1994 at the Harvard Semitic Museum, the exhibit features the work of George Reisner and the Museum of Fine Arts as well as the American Research Center in Egypt Sphinx Project (1979–83), the Giza Plateau Mapping Project sponsored by the American Research Center in Egypt and Yale University (1984–88), and the Koch-Ludwig Giza Expedition sponsored by the Oriental Institute. On April 12 he

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**Carol Meyer**

Carol Meyer’s personal research activities consisted largely of lectures presented and work on publications. In June she gave a talk for the museum volunteers on the recent work at Bir Umm Fawakhir in the Central Eastern Desert of Egypt, and in November, a more formal lecture on the same subject to the members of the Oriental Institute. Also in November she prepared a paper, “The Geological Context of Bir Umm Fawakhir,” for the Egyptian-Italian Seminar on Geosciences and Archaeology in the Mediterranean Countries, delivered in Cairo by co-author Mohamed Badr el-Din Omar. Meyer gave another lecture at the 29th International Congress on Medieval Studies in Kalamazoo in May, and one for the Greater Oak Lawn Diggers Club in June 1994. In addition to a spate of publicity in the summer, the full report on the 1992 season at Bir Umm Fawakhir was revised in September for the Annual of the American Schools of Oriental Research and the 1993 report was drafted, including contributions from Lisa Heidorn, Walter Kaegi, and Terry Wilfong. With the assistance of John Sanders and two computer-aided drafting programs, all maps produced by both seasons’ surveys were redrawn. Meyer also completed a short article on Bir Umm Fawakhir for The Archaeology of Ancient Egypt: An Encyclopedia and has another on the Wadi Hammamat in preparation. Finally, she wrote the chapter on the Parthian/Sasanian and early Islamic glass from Nippur for the forthcoming volume on the excavations at Nippur.

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**Erica Reiner**

Erica Reiner attended the festive opening in November of the Grand Louvre, in particular the newly opened wing where the Department of Oriental Antiquities has its new home, and where a cast of the Oriental Institute’s winged bull is now on exhibit.

In February, she was an invited speaker at the conference on Religion and the Social Order at the University of South Florida, where she gave a paper on Babylonian Religion. The paper will be published in the Proceedings of the Conference.


She has also submitted and read proof of two articles to appear in volumes honoring colleagues and submitted a third.
Martha T. Roth

Martha T. Roth presented a lecture to the 40th Rencontre Assyriologique Internationale, held in Leiden, The Netherlands, in July 1993, on “The Neo-Babylonian Widow’s Rights of Domiciliation.” In the presentation she argued that widows in Mesopotamia in the late first millennium B.C. were not always cared for by their natal or conjugal families and often sought recourse through the legal system to secure their residence and maintenance rights. The full evidence and arguments are presented in her article, “The Neo-Babylonian Widow,” in the June 1994 issue of the Journal of Cuneiform Studies.

The summer of 1993 was spent working on her editions of the Sumerian and Akkadian law collections, with the support of a National Endowment for the Humanities Summer Stipend. Law Collections from Mesopotamia and Asia Minor includes normalized editions of eleven Sumerian and Akkadian collections, providing reliable and up-to-date English translations for the use of both comparative legal historians and cuneiformists. The complete manuscript for the volume was sent to the editor in the spring of 1994, and Roth looks forward to a 1995 publication in the series Writings from the Ancient World sponsored by the Society of Biblical Literature.

In September 1993 Roth participated in a symposium of the Canadian Society for Mesopotamian Studies on “Mesopotamia in the Neo-Babylonian Period” at the University of Toronto, where she spoke on “The Neo-Babylonian Family and Household.” In November she attended the meetings of the Society of Biblical Literature and American Academy of Religions in Washington, D.C. where she was a respondent for the Gender and Cultural Criticism Consultation, “The Queen of Heaven: Goddesses in the Ancient World,” and presented a paper, “Family, Ethnicity, and Community in Mesopotamia during the Persian Period,” in the Literature and History of the Persian Period Group.

At the American Oriental Society Meetings held in Madison, Wisconsin, in March 1994, Roth was elected Section Chair for the Ancient Near East. Throughout the 1993–94 academic year, Martha Roth continued her editorial duties for the Chicago Assyrian Dictionary (see separate report), her teaching, and her other university service commitments.

William M. Sumner

William M. Sumner presented a lecture on the history of archaeological research in Fars Province, Iran at the opening of the exhibit Before Persepolis: Anshan in Highland Iran on October 21, 1993 at the University Museum, University of Pennsylvania. The exhibit included objects on loan that were excavated by the Oriental Institute at Tall-i-Bakun and Persepolis between 1931 and 1938 and objects excavated by the University of Pennsylvania at Tal-e Malyan, ancient Anshan, under Sumner’s direction in 1971–78. Sumner also presented a paper on chronological problems in Fars province at the symposium “Before Persepolis: Highland Iran in the Third Millennium B.C.” in Philadelphia on March 10–11, 1994. Both the exhibit and the symposium were organized by Holly Pittman and Robert H. Dyson, with funding from the Hagop Kevorkian Fund.

Emily Teeter

Much of Emily Teeter’s research has continued to be devoted to the publication of objects from the Oriental Institute’s excavation of Medinet Habu some sixty years ago. In late August, she traveled to Berlin to retrieve the “lost” documentation of the project. Among the material was a previously unknown manuscript for a catalogue of small finds from Medinet Habu produced by Rudolf Anthes, who worked at the site from 1931–33. Although sections of the manuscript did not survive, she has been piecing the selection of artifacts together from the object registers recovered from Berlin. Starting with the section on scarabs and seals, she is translating and heavily annotating the text with contextual information and where possible exact locations. Her continuing work on figurines and votive beds from Medinet Habu has benefited tremendously from the recovery of the records.

In conjunction with her work, Emily gave lectures on Medinet Habu to the University of Arizona and to groups in the Chicago area including the James Henry Breasted Society. She gave a presentation on an important limestone statue of Amunhotep Son of Hapu from Medinet Habu at the annual meeting of the American Research Center in Egypt.

Publications for this year include an article on bronze votive tables in our collection and other museums in the volume in the memory of Klaus Baer (*For His Ka: Essays Offered in Memory of Klaus Baer*), and she contributed reviews to the *Journal of Near Eastern Studies, Bibliotheca Orientalis*, and *The Classical Bulletin*. A mass market book on Nubia, for which she served as consultant, appeared in the spring. Other projects include an article on the human body in ancient Egyptian texts, and the finalization of revisions on her 1990 dissertation in preparation for its publication.

Emily served as consultant for several other museums. She was responsible for writing the Egyptian sections of a script for an innovative CD gallery guide for the Seattle Art Museum. The program, which incorporates selections of ancient Egyptian texts and poetry, operates on newly developed hardware. The project was debuted at the annual meeting of the American Association of Museums in Seattle. She also served as a consultant for the Art Institute of Chicago’s installation of Egyptian art in their new galleries of Classical and Ancient Art. She was responsible for the labels, the didactic information for the gallery, and also the Egyptian sections of the companion volume of *Museum Studies*.

She led several members’ tours this year including “Oman, Bahrain, and Yemen,” and “Egypt in New York.” She also traveled independently in southeastern Turkey.
Edward F. Wente

In conjunction with the much publicized discovery of the Medinet Habu excavation records, which had supposedly been lost in Germany during World War II, Edward F. Wente has undertaken an examination of the twenty hieratic ostraca that were found in the Medinet Habu temple complex and are now housed in the Oriental Institute Museum. Although a number of important papyri are believed to have been unearthed during the last century in the area of Medinet Habu, it is remarkable that so few hieratic ostraca were discovered in the Oriental Institute’s excavations at this site. During the Twentieth Dynasty Medinet Habu became the administrative center of western Thebes, and by the end of this dynasty the crew of workmen who prepared the royal tombs had moved from the village of Deir el-Medina into the more secure confines of the Medinet Habu enclosure wall. Most of the datable hieratic ostraca can be assigned to the last several reigns of the Ramesside Twentieth Dynasty.

One ostracon, however, seems to date from the reign of Ramesses III, whose mortuary temple was the largest edifice within the complex. Found not far north of the great pylon of the temple, this ostracon contains the beginning of a cordial letter from an archivist of the treasury of Amun to a lector priest. Among the later hieratic ostraca is a record of the delivery of fish by fishermen known from other published documents. Fish were the primary source of protein for the necropolis community. Other ostraca in the group indicate that the distribution of rations was still being made to the right and left halves of the crew as had been the practice at the village of Deir el-Medina. Wente had hoped that some of the ostraca might date from the time of the building of the mortuary temple and provide evidence for the organization of work, but none of the documents can be assigned to this period. Wente’s translation and study of Ramesside royal stelae are now focused upon the material from the Twentieth Dynasty.

Having taught a course on texts from the Amarna period last autumn, Wente is preparing an article discussing aspects of Akhenaten’s deity, the Aton. Generally in works treating Akhenaten’s religious revolution, the Aton is considered a somewhat remote deity, revealed only to the king and merely having physical contact with commoners through his visibility as a radiant sun disk. In contrast to traditional deities, the Aton appears as a mute god, who does not speak in words. What Wente is examining are the human qualities of the Aton as expressed in texts from the tombs at Amarna and the consequences such terminology may have upon the commoner’s relationship to the Aton.

Donald Whitcomb

This might be considered the “year of Aqaba,” beginning with last year’s Annual Report that featured Aqaba on the cover and as thematic illustrations. This research project, which was initiated by Donald Whitcomb in 1986, has continued quietly for some seven years until this new publicity. This attention set the stage for the 1993 season of excavations (see separate report). The 1993 season was the largest and longest since the initial discoveries of the 1987 season (some forty-five days of digging, from November 1 until after Christmas). The results of this season were the subject of a lecture to the Oriental Institute membership in mid-March.
Finally the Annual Dinner was held in honor of the Aqaba Project, for which the author briefly discussed “Aqaba and Islamic Archaeology at the Oriental Institute.”

Beyond the Aqaba Project, Don attended the Fourth ARAM conference in Oxford on “Cultural Interchange in the Umayyad Era,” where he gave a paper, “Were there amars in Syria?” The Syrian context will be considered next year in Damascus when he will discuss “The Middle Islamic Period in the Archaeology of Bilad al-Sham” at the Bilad al-Sham conference. This context was reflected in his course, “Late Levant,” which he taught during the winter quarter. Don continued to direct the Middle East Urbanism workshop, with the assistance of Tim Harrison. His lecture on the Arabian city resulted in an article, “Urbanism in Arabia.” This was in turn a by-product of his article, “Out of Arabia: Early Islamic Aqaba in Its Regional Context,” now submitted for publication by the French Institute in Cairo.

Work also progressed on An Encyclopedia of Islamic Archaeology, with the first articles already submitted. One of the major problems facing this project is to keep the subject limited, as correspondents suggest an ever-increasing range of subjects. Fortunately this complexity is matched by a wide enthusiasm for this much-needed tool for Islamic archaeologists and historians and a wider group of scholars. This encyclopedia will establish Islamic archaeology as a field of study, much as Breasted established the “Fertile Crescent” at the beginning of this century. The interest that the Aqaba Project has generated this year has been most gratifying; it is possibly more important to look at the broader context of the Encyclopedia of Islamic Archaeology, a deserving project in the tradition of Breasted and the Oriental Institute.

Tony Wilkinson

During the summer of 1993 research continued on the archaeological landscape of the Balikh valley, Syria, in conjunction with a team from the National Museum of Antiquities, The Netherlands (see separate report). En route for Syria Tony Wilkinson visited Gordion, Alishar Höyük, Kerkenes Kale, and Kestel in Turkey. At the last-named site, a preliminary reconnaissance was made in preparation for a future landscape study of the agricultural supply zone of the Kestel/Göltepe tin-mining complex. Also on the subject of landscape studies and early agriculture, during the spring of 1994 a new project was initiated in the high plains of Yemen (with McGuire Gibson, see separate report).

Progress has been made on mapping the landscape of southern Iraq using satellite imagery, and a team comprising McGuire Gibson, John Sanders, Michael Rand, and Matthew Huber now has preliminary results for part of the Adhaim-Samarra-Diyala area. Using the existing Sun SPARCstation computer at the Oriental Institute, it should now be possible to extend this work over the entire southern alluvium of Iraq and to add much needed detailed coverage for specific areas of interest such as around Nippur and Abu Salabikh.

Publications in press include a major article on the growth, structure, and development of Early Bronze Age towns in Upper Mesopotamia (Current Anthropology); a report on the development of the archaeological landscape of the Balikh valley, Syria (in a monograph on Excavations at Sabi Abyad); an article analyzing the limit of rain-fed farming in northern Syria (National Geographic’s Research
and Exploration); and a review article concerning recent books on geoarchaeology (Journal of Field Archaeology).

In addition to giving a number of seminars at the Oriental Institute, an updated version of the course on landscape archaeology was offered during the winter quarter of 1994. The following public lectures were presented: “The Development of the Archaeological Landscape of the Balikh Valley, Syria” (at the Boston meeting of the Chowder and Marching Society, October 1993); “Climatic Change and Archaeology in Upper Mesopotamia” (at Argonne National Laboratory, November 1993); “Assyrian Settlement Geography” (Rome, November 1993); “Urban Change and Population Dynamics in Early Bronze Age Upper Mesopotamia” (with Guillermo Algaze, at the Society for American Archaeology meetings, Anaheim, California, April 1994).

THE ORIENTAL INSTITUTE
COMPUTER LABORATORY

John C. Sanders
Peggy M. Sanders

INTRODUCTION

Emerging computer technologies in the areas of information access and exchange are changing the way scholarly research is conducted on university campuses. Since the spring of 1991, when all offices in the Oriental Institute were connected to the University of Chicago’s Ethernet network backbone, Institute faculty and staff have been able to choose from a variety of Wide Area Networks (WAN), such as the Internet, Bitnet, Gopher, Wide-Area Information Servers (WAIS), and World-Wide Web (WWW) networks as well as the Institute’s own Local Area Network (LAN), and to use these resources to access and process an ever-increasing amount of digital information that is pertinent to the field of ancient Near Eastern studies. Over the next years we will witness the continued growth and expansion of such network computing, as both individual users and the entire university community expand their reach beyond the traditional boundaries of desktop, office, building, and campus.

The diversity of computer technologies available today is staggering compared to that of a few years ago. Computer-aided drafting, image processing, spatial analysis, text recognition, and database management techniques have become more sophisticated, and user demands are for integration and networking and always for more data. The coordination of these technologies is vital. They need to be managed and focused on the research goals of the Oriental Institute, forming the technology infrastructure upon which future research and scholarship by the Institute’s faculty, staff, and students will be founded.
The Oriental Institute Computer Laboratory concentrated much of its efforts during the past year maintaining the Institute's leading role in ancient Near Eastern studies through the adoption of three specific computer technologies: the World-Wide Web Database, the Ancient Near East Mailing List, and the File Transfer Protocol File Server. The database, mailing list, and file server are intended to provide access to an ever-increasing amount of digital information stored on remote file servers around the world and to promote the electronic publication and further public dissemination of the work of the Institute's faculty, research projects, and the collections of the museum.

The establishment of these three electronic gateways at the Oriental Institute in such a short span of time emphasizes the commitment of the Computer Laboratory to promoting the most appropriate computer technologies in the furtherance of research by Institute faculty, staff, students, and visiting scholars. We would like to thank our collaborator in these ventures, Charles Jones, the Oriental Institute's Research Archivist; he has been most supportive of these efforts, and his suggestions and ideas concerning the best and most versatile solutions for accessing digital information over the Internet and his further willingness to take an active part in the day to day management of several of these databases have helped guide decisions and have contributed immensely to the final form of the Oriental Institute's first electronic doorway to the Internet.

Oriental Institute World-Wide Web Database

World-Wide Web is an international network of computer file servers and databases on the Internet that uses an information-retrieval system developed in 1989 by Tim Berners-Lee, a computer specialist at the CERN physics laboratory in Geneva, Switzerland. It allows researchers to exchange information through the use of a format known as "hypertext." With hypertext, highlighted key words and images in ordinary text documents are employed to point, or link, to related sources of information. These additional sources include text, image, video, and sound files that may reside on any server throughout the worldwide network. The underlying networking model of the database, called client-server computing, allows users at any personal computer or workstation connected to the Internet to request information from any World-Wide Web server. The easy access to an ever-growing number of database sources worldwide from software programs (such as Mosaic, which is a viewer program written by the National Center for Supercomputing Applications in Champaign, Illinois) is responsible for much of the movement toward electronic scholarship at universities around the world.

In February 1994 the Computer Laboratory began building the Institute's first Internet-accessible World-Wide Web database containing general information about the Oriental Institute, its museum, and research projects. Although still under development, our database is now available to the entire Internet community. At present this database resides on an Apple Macintosh computer in the University of Chicago's Department of Computer Science. We anticipate that at some future date the Oriental Institute will move the database to our own server in the building.

We had a single objective in creating this database: to have information about the Oriental Institute reach a worldwide audience through the medium of electronic publication, a new and exciting vehicle for the dissemination of scholarly informa-
tion that holds great promise for the Institute as we approach the twenty-first century. The use of this and other forms of electronic communication will provide faculty, staff, and the general public with ever-increasing access not only to the research materials of the Institute but also to similar databases residing at other institutions and universities throughout the world.

Although World-Wide Web databases already exist for classical studies, for example, the Classics and Mediterranean Archaeology server at the University of Michigan, the Oriental Institute is leading the way with the creation of this first World-Wide Web database centered on ancient Near Eastern archaeological and philological research. The fact that all major universities worldwide are connected to the Internet, coupled with the power and ease of electronic publishing formats, indicates that more scholarly research and communication using such institutional databases will take place over the Internet during the coming years. It is our hope that the Institute's database will set an example for others to follow.

We began compiling our database by focusing on three recent Institute publications: the Oriental Institute Museum's *Highlights from the Collection* and the *Oriental Institute Annual Reports* for the years 1991–92 and 1992–93.

The section of the database entitled *Highlights from the Collection*, which contains registration and descriptive information along with digital images of sixty-five artifacts from the Oriental Institute Museum, goes beyond the original pamphlet publication as it is also indexed according to subject matter, such as daily life, deities, warfare, etc. The artifacts highlighted in this electronic publication represent a cross-section of the cultural regions and historical periods covered by the museum’s collection.

The other sections of the database include the entries in the 1991–92 and 1992–93 *Oriental Institute Annual Reports* for the museum, research projects, and the individual scholarship of faculty, research associates, and staff. These reports are arranged in the following categories: Oriental Institute Museum; Oriental Institute Research Projects: Archaeology, Philology, Individual Scholarship; Oriental Institute Departments; and Oriental Institute Faculty and Staff.

This type of hypertext database makes it possible to put the same textual and graphic information contained in several book publications into a convenient and easy to use electronic format, while at the same time grouping separate articles together according to their common theme.

In the future we plan to expand both components of the database. The *Highlights from the Collection* section will grow to include additional artifacts, offering a more complete picture of the museum’s holdings and a fuller understanding of life in the ancient Near East. Development of further cross-reference materials for museum artifacts in the database is also under discussion. The section pertaining to the *Oriental Institute Annual Reports* will be updated on a yearly basis, and other types of Institute publications and research materials are being considered for inclusion in our World-Wide Web database.

Ancient Near East Mailing List

In July 1993 the Computer Laboratory and the Research Archives collaborated in the establishment of the Ancient Near East Mailing List discussion group, which is an electronic mailing list on the Internet that supports discussion on topics and issues of interest in ancient Near Eastern studies. The Computer Laboratory over-
sees the computer program, Majordomo, that automates the routine administration of Internet mailing lists and Charles Jones, the Institute’s Research Archivist, administers the mailing list itself. List communications are electronic mail messages sent to each subscriber in either the standard format or in digest form that combines a series of separate contributions into a single electronic mail message to the user. At the present time the Majordomo software resides on the Institute’s Sun SPARCstation 1 computer.

The Ancient Near East Mailing List and Digest currently have more than seven hundred subscribers worldwide, with a daily average of ten mailings to each subscriber and a peak output of thirty to forty messages. A wide range of topics are discussed on the list: new discoveries and publications in the field, public debate on controversial issues of policy and scholarship, job placement information, and other musings by subscribers.

**Oriental Institute File Transfer Protocol File Server**

As a complement to the Ancient Near East Mailing List, an anonymous File Transfer Protocol file server was established on the Institute’s Sun SPARCstation 1 computer in the fall of 1993. The purpose of this file server is to provide easy computer access via the Internet to text, image files, and other types of computer documents and programs that are placed into the public domain by the Oriental Institute. In addition, the Chicago Society of the American Institute of Archaeology and the American Schools of Oriental Research are posting newsletters and other informational documents on our server. Virtually any user connected to the Internet can access our file server to obtain general information about the Institute, its museum and current activities, and its research projects and publications as well as those of non-Institute scholars.

**ARCHAEOLOGY SYMPOSIUM**

On November 6, 1993 John Sanders participated in a day long symposium at the Oriental Institute, “Archaeology for the 1990s and Beyond,” sponsored by the Oriental Institute Museum Education Office and the Chicago Society of the American Institute of Archaeology. In a joint presentation, Prof. Mark Lehner and John Sanders gave a short overview of the development of the computer model of the Giza Plateau and its monuments during the past three years. The discussions centered on the notion that because archaeology destroys the very historic contexts being investigated it is the responsibility of each archaeologist to use every available means to document and record their excavations. Lehner and Sanders explained the surveying and computer technologies that have been used by the Giza Plateau Mapping Project and the Computer Laboratory to record and document the architecture and the topography of the plateau. They also discussed several emerging technologies, laser scanning, remote sensing/satellite image analysis, and hand-held photogrammetry, which promise to provide even better recording accuracy in less time and with minimal damage to the monuments.

**LABORATORY PROJECTS**

**Giza Plateau Mapping Project**

With Prof. Mark Lehner on leave this past year, work on the overall computer model of the Giza Plateau and its architectural monuments has slowed down tem-
One small piece of the puzzle, however, moved closer to completion when Peggy Sanders finished processing the surface geometry in our computer model of the seated pharaoh Khafre, which will be scaled and copied twelve times in the courtyard of our computer model of the Sphinx Temple at Giza.

In last year's Annual Report it was reported that Peggy Sanders had sculpted a clay model of the statue according to Lehner's reconstruction in the spring of 1993 (fig. 1). The foot high statue was then taken to the Biomedical Visualization Laboratory at the University of Illinois-Chicago campus, where with the help of Director Lewis Sadler and his staff a laser scan was made of the statue, resulting in a computer data file of some 70,000 discrete data points that precisely model its surface geometry. During the winter of 1993 we reduced this number by half, edited the remaining data points to reflect more accurately the figure, and finally applied ruled surfaces to the wireframe geometry using the AutoCAD graphics program. The drawing file was then transferred to the Computer Laboratory's ARRIS graphics program to render (or "solidify") the statue (fig. 2).

Besides these monuments from the Giza Plateau, work continues on the Computer Laboratory’s three-dimensional model of the architectural complex at Saqqara, located to the south of Giza. To date, published plans and sections remain limited and offer little assistance in visualizing the labyrinth of chambers and passages under the famous step pyramid. These early publications did, however, supply the necessary information to create a new three-dimensional computer model of the Zoser pyramid complex.

While the initial motivation for this project was a future publication on pyramids by Lehner, another application for this model presented itself quite unexpectedly. Florence Friedman, Curator of Ancient Art at the Museum of Art, Rhode Island School of Design, asked Lehner if he knew of "better" plans of the subterranean chambers than were commonly available. Fortunately for her, our computer model of the Zoser complex was easily adapted to illustrate her forthcoming ar-
In January 1994 Lehner asked John Sanders to create a three-dimensional surface model for the entire Nile valley from Giza on the north to Dashur on the south, and from the current Nile River on the east to the plateau on the west. As with the Giza Plateau model, he provided thirty-four maps, each at 1:5000 meter scale containing one meter contours, spot elevations, and major architectural and cultural features in the landscape. Peggy Sanders spent the better part of two months digitizing the maps into AutoCAD drawing files and transferring this data into an ARRIS database on our Sun SPARCstation LX computer. Lehner was interested in using this computer database to look for topographic evidence of either the bed of the Nile River or a major canal off the Nile that lay at the base of the plateau during the time the pyramid complexes were constructed. To accomplish this we produced several versions of the surface terrain model, each with a different vertical exaggeration. With the valley floor exaggerated by a factor of 150, a well-articulated trough at the base of the plateau is evident from as far north as Abu Sir south to the Snefru pyramid complex. These are only preliminary results and much refinement of both the data and our construction techniques needs to be made during the coming year. These early results, however, are promising and encourage us in our efforts to develop computer models of archaeological sites.

**Göltepe / Kestel Mine Project**

Soon after joining the faculty in the fall of 1993, Ashhan Yener came to the Computer Laboratory proposing to move all of her archaeological plans, drawings, and photographs of her work at Göltepe and the Kestel Mine area in Turkey into digital documents using the AutoCAD and ARRIS computer graphics programs. To this point three databases have been created from existing drawings:
Figure 3. Original inked drawing of Göltepe Area E, 1993

—Surface terrain and twenty meter topography map for a ten by twelve kilometer area around Göltepe and the Kestel Mine sites.
—Contour map of the Göltepe summit area, with site grid and all trenches from the 1990, 1991, and 1993 excavations.
—Detailed plan of Göltepe Area E after the 1993 excavations.

The original inked drawing of the Area E plan is shown in figure 3, whereas figure 4 shows a plot of its computer equivalent made on the Laboratory’s new Hewlett-Packard DesignJet 650c plotter.

The Nippur Expedition

For the third consecutive year the interruption to excavations at Nippur has provided increased time for the investigation of new approaches and tools for archaeological analysis. During the past year our efforts concentrated on remote sensing capabilities, which were facilitated by the gift of a Sun SPARCstation computer for satellite image analysis by the Women’s Board of the University of Chicago in the spring of 1993. In the fall of 1993 the Institute purchased fourteen Landsat multi-spectral satellite images of central and southern Iraq that were taken at various times during the past twenty years. With the help of two students, Michael Judin and Matthew Huber, the latter an assistant with Dr. Raymond Pierrehumbert, Department of Geophysical Sciences, Prof. McGuire Gibson, Tony Wilkinson, and John Sanders have begun to develop a strategy for interpreting the massive amounts of geomorphological and cultural data that these Landsat images contain. The pro-
cess of becoming competent with a new computer technology is slow, but we are confident that we will have initial results to present in next year's Annual Report.

Publications Office Accounts Receivable Database System

The Computer Laboratory has written a new Accounts Receivable and Book Inventory system for the Institute's Publications Office. The first part of this process, writing the prototype system for the Laboratory's IBM computer using the dBASE III+ programming language was completed in May 1993. During the past year all these software programs were modified to run on the Macintosh computers in the Publications Office, using the Microsoft FoxPro 2.5 programming language, a more recent programming language that has evolved over the past ten years from its dBASE origins. What remains to be completed is the data entry of all the necessary support databases for inventory, stock, authors, customers, and prices. We hope to report on a fully operational system for the Publications Office in next year's Annual Report.

LABORATORY EQUIPMENT/RESOURCES

In the fall of 1993, Apple Computer, Inc., donated a Macintosh Quadra 610 computer and a portrait monitor to the Oriental Institute as part of a grant program with the University of Chicago; we would like to thank Mr. Gary Thompson of Apple Computer, Inc., for this generous gift. The computer has been installed in the Publications Office, where it is helping to further publication of the Institute's research and discoveries.
The Computer Laboratory purchased an Apple Macintosh Centris 650 computer, high resolution color monitor, 24-bit color scanner, and a 256 MByte optical disk drive in the fall of 1993, providing the Institute with a computer system dedicated to scanning both graphic images, drawings, photographs, as well as textual documents. This system resides in the Computer Laboratory and is accessible to all Institute faculty, staff, and students via the building’s computer network.

In December 1993 the proceeds from the 1992–93 Annual Dinner, which benefited the Computer Laboratory, were used to purchase a Hewlett-Packard DesignJet 650c raster plotter for producing large-scale (up to 36” x 48”) color graphics output on paper. The Women’s Board of the University of Chicago had donated a Houston Instruments vector plotter to the Institute in 1988, and over the years this device produced many drawings that were used by faculty and staff for both analysis and the publication of archaeological reports. Computer technology, as well as the Laboratory’s requirements, however, have advanced during the past six years, and the need for a raster plotter capable of printing the newly acquired Landsat satellite images purchased by the Institute meant we had to replace our vector plotter with a raster model. Because of a special offer by Hewlett-Packard, we were able to trade in the Houston Instruments plotter for a generous price reduction on the DesignJet 650c. This impressive machine is now the centerpiece of the Computer Laboratory and is connected to our IBM computer and to the three Sun SPARCstation computers in the Institute. We plan on purchasing the necessary hardware to connect the plotter to the Laboratory’s Macintosh computers in the summer of 1994.

A CLOSING THOUGHT

Research organizations like the Oriental Institute depend on collecting, assembling, and extracting meaning from data. Consequently, its faculty, museum, and project staffs have increasingly come to rely on computers and a computer environment that makes information easily accessible and that promotes the flow of data both vertically within a research project or unit and horizontally among research projects or units across the entire Oriental Institute. Such a computer infrastructure would be foreign to James Henry Breasted. He would heartily concur, however, with its intended purpose, to help maintain the Oriental Institute as a leader in the field of ancient Near Eastern studies, combining research, teaching, and artifact collections with a regional and chronological focus that is virtually unparalleled throughout the world.

Although the Computer Laboratory is keeping abreast of the latest developments in computer information access, storage, and electronic publishing, the benefits of these technologies will only be realized when they are applied to the on-going work of the Institute’s faculty, museum, research projects, and staff. Demonstration projects undertaken by the Computer Laboratory, such as the Institute’s World-Wide Web database, are a necessary first step, but the measure of their success lies not with these projects themselves but rather with the integration of their technologies into the management of the Institute’s collections and research projects.
The demand for publications of the Oriental Institute continued at a record pace for the third consecutive year as sales reached their highest mark and surpassed one-hundred twenty-five thousand dollars. Keeping up with the burgeoning sales put the Sales Office to the test when James Wherry Willis, Manager of Marketing and Sales, resigned and accepted a position with the University of Chicago Press. James' expert marketing skills were ably succeeded by those of Christopher G. B. Kahrl, who was hired as the new Sales Manager in October 1993. The Editorial Office was equally busy as Richard Schoen, Publications Assistant, also resigned and accepted a job with the University of Chicago Press. Due to budget constraints, Richard's position will not be replaced until sometime in the future; thus, the staff of the Publications Office has been reduced to three: Thomas Holland, Thomas Urban, and Christopher Kahrl. Amidst the transitions the Publications Office had a very fruitful year and I am pleased to report as follows.

**Sales Office**

Christopher continued the practice of hiring independent agencies to exhibit our books at the meetings of various societies. This year he made arrangements with Scholars Choice to exhibit our books at a number of conferences, he advertised our books in the Oriental Institute Research Archives Acquisitions List, and he announced the publication of new titles on the electronic Ancient Near East Mailing List. It was an excellent year for sales, much of which must be credited to the popularity of several new titles, as well as to our price increases from a year ago.

**TABLE OF SALES**

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<td>Assyriological Studies (AS)</td>
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<td>Chicago Assyrian Dictionary (CAD)</td>
<td>889</td>
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<tr>
<td>Chicago Hittite Dictionary (CHD)</td>
<td>39</td>
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<tr>
<td>Materials and Studies for Kassite History (MSKH)</td>
<td>18</td>
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<tr>
<td>Oriental Institute Communications (OIC)</td>
<td>145</td>
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<tr>
<td>Oriental Institute Nubian Expedition (OINE)</td>
<td>164</td>
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<tr>
<td>Oriental Institute Publications (OIP)</td>
<td>371</td>
</tr>
<tr>
<td>Studies in Ancient Oriental Institute Civilization (SAOC)</td>
<td>847</td>
</tr>
<tr>
<td>Miscellaneous*</td>
<td>20</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>2,577</strong></td>
</tr>
</tbody>
</table>

*Volumes published jointly with other institutions:


Uch Tepe II: Technical Reports. McG. Gibson, ed.

1993–1994 ANNUAL REPORT
John Sanders, Head of the Computer Laboratory, completed the database system for the sales office. John has completed its design and needs only to convert the computer code from DOS to Macintosh code.

**Editorial Office**

The highlight of the year in the Editorial Office was the successful testing of a new method of preparing manuscripts for printing. Rather than preparing camera-ready copy in-house, an electronic version of a manuscript was transmitted to a printing company, which output the electronic file as a negative from which metal printing plates were made. Last year's *Annual Report* was prepared electronically and served as a test for this new method of book production; the results could not have been more spectacular. Thomas Urban, who prepared the manuscript, reports that every special character and mix of fonts and typefaces printed without any problems. The valuable information learned during production was put to use immediately in the production of the *Hittite Dictionary*. At the time of this writing a one-hundred twenty page fascicle of the *Hittite Dictionary* was almost ready for press. I wish to thank Professor Harry Hoffner for his patience during this first attempt to publish this extremely complicated manuscript in-house. The Editorial Office hopes to send all future titles to press in this format as it not only results in better quality books but it is also less expensive.

The Editorial Office upgraded its book production software (Microsoft Word to v5.1 and PageMaker to v5.0) and acquired a Macintosh Quadra 610 from Apple Computers, Inc., as a part of a grant program. The development of a new font for the Assyrian and Hittite dictionaries, this time based on the New Baskerville typeface, continued. With regard to the development of fonts, we hope in the end to have two fonts that would be used by our authors: one for the Egyptologists and a second for the Assyriologists and Hittitologists.

Thomas Urban continues to work with Melanie Jansen, Membership Coordinator, to produce the Membership quarterly newsletter, *News & Notes*, the *Annual Report*, and various other publications for the Membership Office that can be prepared in-house. Although these Membership publications add to the workload, the experience he gains by using PageMaker is quickly put to use in preparing the *Hittite Dictionary* for press.

The three titles listed as “in preparation” in last year’s *Annual Report* were printed—OIP 111, SAOC 55, OINE 10:

3. *For His Ka: Essays Offered in Memory of Klaus Baer.* David Silverman, ed. SAOC 55.

In addition to the above publications, three other volumes were printed, were sent to press, or were in preparation, as follows:


The following titles were accepted for publication during the period covered by this Annual Report:

1. The Festival Procession of Opet in the Colonnade Hall. Epigraphic Survey. OIP 112.

RESEARCH ARCHIVES

Charles E. Jones

This has been a year of solid progress for the Research Archives in several areas. We have managed to settle comfortably into the new configuration of stacks and study space required by the move of a year and a half ago which was described in last year’s Annual Report. Acquisitions continued at a steady pace—we acquired and cataloged more than thirteen hundred volumes; we finally began the long planned Retrospective Cataloging Project; and we implemented and developed the Ancient Near East Mailing List (ANE) on-line discussion group, an electronically linked community of scholars. As the collections grow, the facilities of the Research Archives continue to see increased use by faculty and staff of the Oriental Institute and other divisions of the University of Chicago, by students in the Department of Near Eastern Languages and Civilizations, by members of the Oriental Institute, and by more and more frequent visiting scholars from around the world. In addition to the steady flow of routine acquisitions, we have been fortunate to acquire the Papyrological and Egyptological library of the late Professor Linda Ricketts. Early this spring, the University of Chicago Libraries, through the good offices of Catherine Mardikes, the new Bibliographer for Classics and the Ancient Near East, transferred to us the legendary pamphlet file of the old Oriental Institute Library. We have begun the process of integrating this important mass of material into our own collections.

ELECTRONIC MEDIA

As the year began in early July 1993, we publicly announced the existence of the Ancient Near East Mailing List, an on-line forum for the scholarly discussion of issues related to the ancient Near East. For more than a year prior to that date, with the intimate collaboration of John Sanders, Head of the Oriental Institute Computer Laboratory, we had been investigating the various means by which we might begin the electronic distribution of files, and by which we could promote communication among scholars locally, nationally, and globally. The experience we had all gained following the installation of the local electronic mail system, QuickMail,
had whetted the appetites of a number of staff and faculty members for the establishment of media connected to the Internet that would to some degree filter out the kinds of resources which would be of interest to scholars dealing with the ancient Near East, without requiring each and every one of them to become an accomplished “network surfer.” We ultimately settled on beginning with a double-headed approach. The two components of this approach are the electronic mailing list and an archive site. Subsequent to the implementation of these resources, John Sanders has continued the development of the Oriental Institute’s connection to other components of the Internet, particularly the document he designed and continues to develop for the World-Wide Web. Each of these technical developments is described more fully in the report of the Oriental Institute Computer Laboratory (above). I would like to concentrate here on the role such new technologies are beginning play in the world of the library.

Academic research (at its best) is conducted in three interconnected ways: dialogue with artifacts, dialogue with books, and dialogue with humans, each of which are components of the particular variety of research that is conducted in the library. It has always been the exceeding good fortune of those working in the Oriental Institute to have not only an extraordinary collection of artifacts in the museum, its associated archival and photographic materials, and an extraordinary library in the Research Archives, but also a large number of teachers, students, and colleagues—all in the same building. Questions, whether trivial or consequential, simple or complex, can be discussed with interested and informed colleagues as they arise. Difficulties encountered in the interpretation of primary or secondary literature can be easily and quickly solved by consulting with authorities who are physically adjacent to or actually visible in the reading room of the Research Archives. With the introduction of on-line academic discussion groups, as exemplified by the Ancient Near East Mailing List, the physical adjacency is no longer a necessity. One simply poses a query, formulates a hypothesis, or expresses an opinion, and sends the resulting text to an address at the Oriental Institute file server. The file server then redistributes the message to each of the electronic mail addresses that have voluntarily subscribed to the list. Anyone who then receives the message is free to respond, either publicly or privately, to the person sending the original message. Most frequently, in actual practice, responses to messages posted on the list are sent privately, but there have been a number of interesting and stimulating public debates of issues of substance. Like all scholarly discussion, this medium depends upon the tolerance, goodwill, generosity, and occasionally the good humor of each of the participants. The principle of voluntary subscription demonstrates the apparent success of the medium and testifies to the willingness of the scholarly community to participate: the Ancient Near East Mailing List currently boasts more than seven hundred addresses subscribed, and an actual readership of nearly eight hundred individuals. The real and potential effect on scholarship and on the community of scholars is enormous. Each of the members of the list is effectively brought into the reading room of the Research Archives. Likewise, each member of the electronic mailing list is also brought into the reading room or research facilities of each of the other projects represented by membership in the list, and those scholars, teachers, researchers, and students whose circumstances require them to work in physical isolation from their colleagues are provided with a global electronic “common-room.” It is significant that this common-room is provided by the Oriental Institute, and that it forms a compo-
nent of the Research Archives. I invite anyone wishing further information on the
Ancient Near East Mailing List to contact me (see the telephone numbers and e-
mail addresses printed on the last pages of this Annual Report).

For the bibliographer, such resources have provided an immense help. It is now
possible to track down difficult references with a speed unheard of half a decade
ago. Archival sources can be examined remotely through the use of cooperative
local surrogates, electronic scanners, and the like. Immediate questions can be an-
swered immediately. Information on the development of electronic archives can
be shared. Indeed, with the development of sophisticated text/image databases it
is now possible to read documents that are maintained remotely and thereby to
reduce the acquisitions costs of the library.

While it can be fairly said that the development and use of on-line electronic
resources and communications media have already revolutionized the management
of the library, the flow of information, and the scope of scholarly dialogue, it is
also true that we cannot begin to imagine the topography of the technological in-
frastructure that will come into existence by the end of the millennium. It remains
the role of the library to investigate the resources that appear, to bring them to the
attention of those for whom they will be of use, to develop techniques by which
resources can be used and exchanged, and to provide both a physical, mental, and
electronic environment conducive to productive research.

It becomes more and more evident as time passes that certain components and
functions of the Research Archives and of the Oriental Institute Computer Labora-
tory not only overlap, but are identical. It has been my pleasure to be able to work
closely with John Sanders to develop new resources and to plan for the future needs
of each of our departments. In the plan for the new wing of the Oriental Institute
are two areas that will allow both of these departments to acquit themselves far
more effectively than they have been able heretofore. The topmost level of the
new wing, some seven thousand square feet, will become climate-controlled stacks
space for the Research Archives. Since this space will allow us room to grow for a
number of years, it will also (initially, at least) provide additional space for classes,
seminars, meetings, etc. Moving the books from the existing stacks space will al-
low us to restore the full complement of tables and chairs in the reading room and
will enable us to vacate the current stacks areas on the mezzanine level of the
library and in the adjacent offices. William Sumner, Director of the Oriental Insti-
tute, has expressed the intent that the vacated mezzanine level become the new
home of the Computer Laboratory. Its adjacency to the Research Archives will al-
low us to share resources, to maintain a single security perimeter, and in general
to act in a fully integrated manner.

CURRENT ACQUISITIONS

During the past year we have done much to standardize and to regularization the pro-
cedures for processing new material into the Research Archives. With the aid of
Archival Assistant Belinda Monahan, currently a graduate student in archaeology
in the Department of Near Eastern Languages and Civilizations, we have worked
out techniques that allow us to streamline the production of analytical catalog
records, to edit them effectively, and to produce the two parallel organs of the Re-
search Archives: The On-Line Catalog and the Oriental Institute Research Archives
Acquisitions List.
Two issues of the Acquisitions List have appeared during the year:

Numbers 7–8, including material acquired and cataloged during the period February–July 1993, appeared in the autumn of 1993. Its 530 pages include 971 cataloged items with an indexed analytical list of 5,237 essays, articles, and reviews.

Numbers 9–10, including material acquired and cataloged during the period July 1993–January 1994, appeared in the early summer of 1994. Its 558 pages include 1,083 cataloged items with an indexed analytical list of 5,356 essays, articles, and reviews.

RETROSPECTIVE CATALOGING PROJECT

In the autumn of 1993 we began the long promised and extremely arduous process of processing data for the Retrospective Cataloging Project. We have been fortunate to have acquired the services of Gregory Munson, graduate student in Assyriology in the Department of Near Eastern Languages and Civilizations, as an Archival Assistant in the Research Archives, and it has been his task this year to work on this project. We decided to develop a mutually advantageous corpus for him to process, allowing him to thoroughly survey a body of literature within his own general area of interest and at the same time to provide a record, to be made available via our on-line catalog, of each of the bibliographical items within that corpus. Greg began by selecting “Assyrian History in the Periodical Literature” as his corpus, but almost immediately modified the corpus to include complete runs of each of the periodicals of central interest to Assyriology/Cuneiform Studies. During the nine and one half months of the academic year, Greg has thoroughly examined 262 volumes of journals and yielded a grand total of 10,751 analytical catalog records of essays, articles, and reviews contained in those volumes. The material analyzed so far is as follows:

**Completed**

- Archiv für Orientforschung 1–35
- Assur 1–4/2
- Iraq 1–53
- Journal of Cuneiform Studies 1–42/1
- Journal of the Economic and Social History of the Orient 1–33
- Mar Šipri 1–6/1
- Revue d’Assyriologie 1–84/1
- State Archives of Assyria Bulletin 1–5/2
- TOTAL: 10,751 items

**In Process**

- Anatolian Studies
- Archaeologia
- Baghdader Mitteilungen
- Baghdader Mitteilungen Beiheften
- Bibliotheca Orientalis
- Journal of Near Eastern Studies
Journal of the Ancient Near Eastern Society
Journal of Semitic Studies
Orientalia NS
Zeitschrift fü r Assyriologie

This very substantial corpus is currently passing through the editorial process. Upon the completion of that process it will be loaded into the On-Line Catalog.

As of the time of writing, the On-Line Catalog holds 30,550 records. With the addition of the material currently in process from the Retrospective Cataloging Project and the current acquisitions, I expect that we will add another 25,000 records to the catalog by the end of the summer.

The Research Archives welcomed an entirely new staff this year. It has been my pleasure to work with both Belinda Monahan and Greg Munson on the projects described above. Both of them have exhibited diligence, thoughtfulness, cheerfulness, and flexibility in their work with me and with the users of the Research Archives. I am also grateful for the continuing support and collaboration of the faculty and staff of the Oriental Institute, and particularly to the staff of the Museum, the Computer Laboratory, the Public Education Department, and the Journal of Near Eastern Studies. The members of the Oriental Institute and the general public who support the Research Archives in various ways are legion. It is your donations of books, funds, and time that keep us going.

In the year ending March 1, 1994, the acquisitions statistics for the Research Archives are as follows:

<table>
<thead>
<tr>
<th></th>
<th>April 1993–March 1994</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>Monographs and Series</td>
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<tr>
<td>Journals</td>
<td>226</td>
<td>8,682</td>
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<td>Total Books</td>
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<td>Maps</td>
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<td>Pamphlets</td>
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<td></td>
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<tr>
<td>Data Files</td>
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</tr>
</tbody>
</table>

1993-1994 ANNUAL REPORT
Overleaf. James Henry Breasted with the governor of Aleppo on the steps of the outer tower before the citadel entrance, with vestibule of main door visible in the background. Aleppo, Syria. 1920
As I look back over the past year, I am amazed at how much has been accomplished in the museum—from face-lifts in the galleries to new exhibits, as well as the behind-the-scenes activities that made it all possible. None of this could have happened without the considerable efforts of the entire museum staff, all of whom I thank for their tremendous enthusiasm and dedication.

The process of updating and renovating the galleries continues throughout the museum. In January, the Centennial exhibit, “Sifting the Sands of Time: The Oriental Institute and the Ancient Near East,” was dismantled, and we were able to incorporate some of its cases into both the Egyptian and Assyrian halls, to take advantage of the new information they provide. The gold, ivories, and Canaanite cult objects from Megiddo are now displayed adjacent to the exhibit of the stratigraphy of the same site, so that visitors can understand more about the archaeological context of the pieces within the history of the mound as a whole. The statue base of Djedhor has been placed in the Religion alcove in the Egyptian Gallery, and the cases illustrating “The Prehistoric Projects” and “The Syrian Hittite Expedition” now enliven the Anatolia and Syria alcoves of the Assyrian hall. In addition, in the Egyptian Gallery, the writing alcove has been rearranged and reinstalled, with a new introductory panel on ancient Egyptian writing.
May 31 saw the opening of a small temporary exhibit, “Sports and Games in the Ancient Near East,” which was mounted to coincide with the World Cup Soccer competition that is to be held in Chicago during the summer of 1994. Curated by Emily Teeter, Assistant Curator of the Oriental Institute Museum, the exhibit draws upon the permanent collection to illustrate aspects of archery, horsemanship, hunting, board games, and physical sports throughout the ancient Near East. Congratulations to Emily, and to museum preparators Joseph Searcy and Katherine Luchini, for giving us such an interesting and attractive exhibit. “Sports and Games” will remain on view through September 18, 1994.

Throughout the year, the museum (and the Oriental Institute as a whole) continued to garner good publicity coverage of exhibits, educational programs, and research projects. Through the preparation and dissemination of quarterly publicity packets, Kaylin Goldstein, Education and Public Programs Assistant, has insured that the many events sponsored by the museum consistently are posted in the local and regional press. William Harms of the University News Office continues to work with us targeting specific items for additional attention and has been largely responsible for the major media coverage given many projects over the past year.

Bill and Emily worked together to achieve extensive coverage, including major articles in both the New York Times and the Chicago Tribune, concerning the recovery of original records of the Oriental Institute’s excavations at Medinet Habu, Egypt, in 1926–33. These records, assumed to have been destroyed during World War II, were graciously brought to our attention by Dr. Karl Heinz Priese, Director of the Egyptian (Bode) Museum, immediately following the fall of the Berlin Wall and the normalization of relations between East and West. In late August, Emily stopped in Berlin to receive the records and carry them back “home” to Chicago. Media coverage brought this event to the attention of the family of Uvo Hölscher, the field director of the excavations, in Germany. In November, Hölscher’s grand-
son (also named Uvo) contacted William Sumner and offered the Oriental Institute an additional seven volumes of object registers, as well as four volumes of the daily field logs. The Holscher family’s generosity has continued and, in June, they forwarded some five hundred photographic prints and negatives of the excavation and of other sites in Egypt, including the staff of Chicago House in the 1930s. These materials are of critical importance in documenting the results of the excavations and will, in addition, aid in the research of the Epigraphic Survey, which is again working at Medinet Habu. We are deeply grateful both to Dr. Priese and the Holscher family for their generosity in donating all these items to the Oriental Institute Archives.

Emily and Kaylin also have taken advantage of new technology by posting events and schedules through on-line services and on a variety of CD ROM format tourist guides to the Chicago area. As a result of increased publicity of this type, the museum is increasingly recognized as an attraction for tourists and, for example, the collections and programs have been featured in such formats as informative shorts broadcast over cable in hotel rooms.

As a result, our visitorship continues to be high, and head of security Margaret Schroeder and her dedicated staff of supervisors and museum guards continue to answer their questions, request that they not lean on the display cases, and in many other ways protect the collections both on view and in storage.

Planning and preparing for the museum’s forthcoming renovation has been one of the highest priorities for registrar Raymond Tindel and his devoted crew of volunteers this past year. So far during 1993–94, they have handled more than thirteen thousand objects in the course of such tasks as checking and up-dating inventories, answering research questions, and retrieving material for visiting scholars or for display, photography, and conservation. More than sixty visiting scholars, Institute faculty, staff, and students needed assistance with access to the collections during the past year; some came to see only one or two objects, others spent as much as ten days sorting through thousands of flints and sherds.

Ray was also called upon to give a number of “behind the scenes” tours of the basement storage areas as we attempt to educate the university community and our other supporters about the critical need for renovation and expansion. These groups often ended up in the Conservation Laboratory, where conservators Laura D’Alessandro and Barbara Hamann initiated them into the intricacies of conservation and the need to provide a stable environment for our collections.

This was also a year in which those in registration did, well, a lot of registering. Registering is the process by which objects are identified, given a registration number, and entered into the museum’s records with such information as their provenance, material, and date. This process enables Ray and his staff to keep track of objects, care for them, and make them accessible to scholars and other researchers. Volunteer Peggy Grant has completed the registration of the entire Gremliza survey collection—some 9,515 sherds and other artifacts—and has moved on to the Chogha Mish material, where she has completed some 2,000 pieces. In addition, Georgie Maynard and Peggy Wick registered about 2,000 Amuq pieces last year, including over 1,700 flints. Registry also is currently involved in a major reorganization and cataloguing of the museum’s modern casts and impressions of ancient materials, such as reliefs and cylinder seals.

In 1993–94, the museum made two loans to other museums for exhibits. Twenty-three of our objects traveled to the University Museum for “Before Persepolis:
Anshan in Highland Iran," and five objects are now on view at the Art Institute of Chicago in their new galleries of ancient art.

These statistics indicate an amazing level of activity made possible by student assistants Kate Sarther and Robin Kasson, and volunteers Debbie Aliber, Judy Cherchi, Aimee Drolet, Leila Foster, Peggy Grant, Mary Grimshaw, Janet Helman, Georgie Maynard, Lillian Schwartz, Nicole Simpson, and Peggy Wick. Thank you all so very, very much.

In conservation, Laura and Barbara were kept busy cleaning and restoring the casts for the "Sports and Games" exhibit; conserving, preparing condition reports for, and packing the objects that went out on loan; and maintaining the general health of the collection. In addition, they hosted a number of visitors, including Dr. Sheldon Landsberger, Director of the Neutron Activation Analysis Laboratory, University of Illinois, Champaign-Urbana; Dr. Sultan Muhesen, Director General of Antiquities, Syria; and Dr. Sarah Wisseman, Director, Program on Ancient Technologies and Archaeological Materials, also at Champaign-Urbana.

As elsewhere in the museum, many of the activities in the Conservation Laboratory were geared toward the renovation and expansion project. In October, Laura and museum archivist John Larson submitted an IMS Conservation Support grant application requesting $25,000 worth of new map cases, shelving, and archival supplies to house oversize archival materials, much of which is now "stored" on a table in the basement. I am delighted to report that the grant was awarded in April and the new cabinets are on their way. When they arrive, they will be set up in the area formerly occupied by the "Sands" exhibit, and the materials will be surveyed and packed in them. In addition, Laura and Barbara are gearing up to begin packing the collections, starting with the stone artifacts, in preparation for the renovation and expansion project. They are working out details of packing procedures, ordering supplies, and, with the help of Joe and Kate, are rearranging the Conservation Laboratory. With the assistance of volunteer Francis Miller, they also have begun repacking and placing organic artifacts in new cabinets in the Organics Room and trying to consolidate storage there to make room for yet more objects. By June, nearly one thousand objects had been repacked, and Laura and Barbara had embarked upon the important task of computerizing all of their back conservation treatment records.

Throughout the year, museum office manager Lisa Snider handled museum purchases and accounting records, answered the telephones, kept our building in repair, located lost trash baskets, and kept us all in good humor at the same time. Lisa also assists John in the day-to-day operation of the photographic services program. During fiscal year 1993–94, the museum received and processed 158 requests for photographic materials and reproduction permissions. About 30% of those requests were for the publication of Oriental Institute photographic images in articles and monographs written by scholars who work primarily in subject areas relating to the study of the ancient Near East. The other 70%, mainly from commercial publishers, generated a modest income that funds the purchase of archival supplies for the Oriental Institute Archives, as well as routine expenditures for photographic paper and darkroom chemicals. Perhaps reflecting a modest upturn in the economy, the total number of photographic requests during the past fiscal year increased about 6% over the figures for last year, while the number of requests for non-photographic, general information has continued at much the same levels as in the past.
A page of the daily field log of Medinet Habu, dated December 9, 1928, with a discussion and drawing of architectural features of the second palace of Ramesses III

Last year, archives volunteers Sandra Jacobsohn and Melanie Petroskey completed re-sleeving the negatives that are currently stored in the Archivist’s office, including just over forty-six thousand negatives in the museum numbering system and fifteen thousand field negatives from Oriental Institute archaeological expeditions. In addition, Sandy has single-handedly resleeved the first two thousand out of the fifteen thousand field negatives from the Anatolian Expedition (Alishar Hüyük) in the photographic file room, adjacent to the Archivist’s office.

Thanks to Lisa, we have begun to computerize the data relating to photographic images in the collections, and almost five thousand photographic records have al-
ready been entered into a database program. Computerization of these records will enable us, at long last, to know exactly what images we have, to search for images of specific subjects for purposes as diverse as research and exhibits, and should enable us to generate a series of specialized lists and catalogues for outside photographic researchers and for in-house curatorial and research needs.

Archives acquisitions for the year included the papers of Helene J. Kantor, Douglas Esse, and Carolyn (Mrs. John) Livingood, all of whom are much missed by the Oriental Institute community.

For 1993–94, the roster of regular volunteers working in the museum archives included Lilian Cropsey, Kay Ginther, Evelyn Ruskin-Gordon, Sandra Jacobsohn, Carolyn Livingood, Melanie Petrosekey, and Joan Rosenberg. In October, Evey Gordon, formerly a volunteer at the Israel Museum, brought her specialized background and skills to a project concerned with generating a history of the Megiddo expedition. We would not have been able to continue many of our day-to-day functions without the tireless efforts, dedication, and moral support of these volunteers, and we thank them for their generous help.

Our photographer, Jean Grant, spent the year capturing Oriental Institute special events on film, producing high-quality prints from even the worst of negatives, and—as usual—making sure that our courtyard garden was a delight for us all. Jean would like to thank her new volunteers Dawn Prena and Irene Glassner, who joined her this year, as well Ria Ählstrom, who still shows up on occasion and is missed when she is not here. And a special thanks to Barbara L. Thompson for the many hours she labored with Jean in the courtyard garden this spring.

All of our activities over the past year (as well as those coming up in 1994–95) have been and will continue to be greatly helped by the two-year General Operating Support Grant that was awarded to the museum in October from the Institute of Museum Services. We are extremely pleased that we received this grant in recognition of the excellence of all of our operations, from collections care and management to educational and public programs, and I want to, once again, thank every member of the museum staff for making it all possible!

MUSEUM EDUCATION PROGRAM

Carole Krucoff

Reaching out to new audiences and creating new partnerships for programming were the guidelines for the Museum Education Program this past year. Collaboration with campus organizations, area museums, and community groups led to a full schedule of programs that ranged from seminars and symposia to festivals and holiday celebrations. In addition, two multi-year grants continued to support outreach programming for two special audiences—Chicago-area families, and teachers and students in the Chicago Public Schools.
School and Teacher Services

More than six hundred 6th and 7th graders from the Chicago Public Schools visited the Oriental Institute this year on field trips they never would have taken without the assistance of a major grant from the Polk Bros. Foundation. Part of a three-year project, these students and their teachers were piloting materials and activities designed to integrate Oriental Institute resources into the public schools’ world history curriculum. This is a significant endeavor since the Institute’s educational program—widely used by suburban school districts and private schools—is either unknown or unused by most of Chicago’s public schools.

During the past school year, the staff of the Museum Education Program, the curators of the Oriental Institute Museum, and William Pattison and Sara Spurlark, consultants from the University of Chicago’s Department of Education, have been meeting regularly with a panel of 6th and 7th grade teachers from six different Chicago public schools. Selected to represent the city’s diverse population, these schools also reflect educational needs that range from bilingual programming to special education to opportunities for the gifted. Using resources identified by the curators, the teachers’ panel is developing prototype classroom and museum approaches to meet a wide variety of student needs.

New approaches the teachers have developed for museum visits include docent-led tours in Spanish for bilingual education classes, multiple field trips that enable students to focus on a particular culture during each visit, and guided tours followed by question-and-answer sessions with Oriental Institute archaeologists. Many of the museum’s docents have been involved in shaping and evaluating these approaches. A group of docents has also volunteered to serve as members of a project advisory committee; members this past year were Debbie Aliber, Bernadine Basile, Charlotte Collier, George Junker, Jo Lucas, and Dorothy Mozinski. The entire committee has offered important advice and assistance.

Assisted by museum docent Christel Betz, students from Bass Elementary School gather information about ancient Egypt as part of a Chicago Public Schools outreach program supported by the Polk Bros. Foundation. Photograph by Jean Grant
Classroom outcomes are also a crucial aspect of the Polk Bros. Foundation project. Results this year have ranged from a class recreation of a wall-sized Egyptian tomb painting to the presentation of an ancient banquet using information gleaned from original sources. Evaluation of all classroom and museum activities is underway; the overall goal is production of a museum/schools curriculum enrichment program that can be used effectively by teachers and students across the entire public school system.

Other museum/school collaborations took place this year. Susan Buta, Kenwood Academy chemistry teacher, returned to repeat the Museum Education Program designed to introduce her high school students to ancient science and historic conservation. Oriental Institute staff, including Laura D’Alessandro, Conservator; Charles Jones, Research Archivist; Raymond Tindel, Registrar; and Tony Wilkinson, Research Associate, shared their expertise during behind-the-scenes student visits. This year, a new procedure reinforced student learning—Laura’s demonstrations of chemistry techniques used to conserve ancient artifacts were replicated by the students when they returned to their chemistry laboratory back at school. This unique program was given city-wide recognition when National-Louis University highlighted the Kenwood Academy/Oriental Institute partnership during an educators’ conference on new approaches for museum/schools collaboration.

Partnerships in programming greatly expand the Museum Education Program’s resources and abilities to reach many different audiences of teachers and students. A prime example is another collaboration based on the sciences that began this past year. The Oriental Institute has joined the University of Chicago’s Department of Astronomy and the Office of Special Programs to offer inner-city high school students an introduction to ancient astronomy in collaboration with the Adler Planetarium. Janet Johnson, Professor of Egyptology, has developed a curriculum outline on the role of astronomy in ancient Egypt. During the next school year, she will present lectures and join educators from the other partner groups to involve the students in projects that include replicating an ancient Egyptian star clock and creating calendar models.

Two additional joint programs reached other audiences. During the winter, the Artifact Center at the Spertus Museum of Judaica and the Oriental Institute’s Museum Education Office jointly planned and presented a pilot outreach program with District 181 of the Hinsdale Public Schools. This program brought three hundred 6th and 7th grade students from Hinsdale to visit Spertus, where they experienced the process of archaeology on a “dig” at the Artifact Center’s reconstructed tell. The students then came to the Oriental Institute where museum exhibits showed them actual results of archaeological excavations in the ancient Near East. Another collaboration, this time with the Lincoln Park Zoo, concentrated only on teachers, offering a joint seminar on “Ancient Animals” that was attended by forty educators from metropolitan-area private, public, and parochial schools.

Public Programming
Designed to attract and serve many different audiences, the public programs offered by the Museum Education Program this year also benefited from collaboration with other groups. An important example is “Archaeology for the 1990s and Beyond,” an Oriental Institute Symposium co-sponsored by the Chicago Chapter of the Archaeological Institute of America. Nearly two hundred participants, many of whom had never taken part in an Oriental Institute event, came to Mandel Hall
to hear some of the Oriental Institute’s finest scholars discuss how archaeology is done today, what it can tell us about the past, and what it will be like as we enter the twenty-first century. Serving in his role as president of the Archaeological Institute of America-Chicago Chapter, Lanny Bell offered the symposium’s introduction. Featured speakers were Oriental Institute faculty and staff members William Sumner, Tony Wilkinson, Ashlan Yener, McGuire Gibson, Mark Lehner, and John Sanders.

Other adult education programming included a full calendar of eight-session courses and one-day mini-courses that drew more than three hundred participants. Eight-week courses offered this year included: Ancient Egyptian Life and Society, taught by Peter Piccione; Ancient Egyptian Law and Ethics, Parts I and II, by Frank Yurco; The Land of the Bible: Ancient Palestine in the Bronze and Iron Ages, by Timothy Harrison; Tale of a Tell: The Archaeology of Ancient Megiddo, by Timothy Harrison; Nomads of the Middle East, by Abbas Alizadeh; Medicine and Magic in Ancient Egypt, by Peter Piccione; History of Ancient Palestine, by Timothy Harrison; Egypt and the Ancient African Kingdoms of Nubia, by Frank Yurco; Art and Archaeology of Mesopotamia, by Augusta McMahon; and Land of Plenty: The Economy of Ancient Egypt, by Frank Yurco.

Mini-courses included Art and Artisans of Ancient Egypt, taught by Assistant Curator Emily Teeter and former Oriental Institute Preparator Phil Petrie; Dine Like an Egyptian, a cooking course taught by docent and professional chef Mary Jo Khouri; and An Eye for Antiquity, taught by Archivist John Larson and Kathleen Gibbons, Director of Education at the Smart Museum of Art. Co-sponsored by the Smart Museum, this course complemented the Smart Museum exhibit “An Eye for Antiquity: Photographs from the Collection of Mr. and Mrs. William Knight Zewadski.”

Hieroglyphs-by-Mail, the popular correspondence course, was offered twice this year. Peter Piccione taught an intermediate version in the fall; Emily Teeter taught a beginners’ course in winter/spring. And Cuneiform-by-Mail joined the roster of courses this past fall with Billie Jean Collins as instructor.

More informal adult education opportunities were available throughout the year at gallery talks, drop-in events, and special lecture programs for the general public. Faculty, staff, docents, and guest lecturers who generously offered their time to present Wednesday evening gallery talks included Lanny Bell, Janet Helman, Kitty Picken, Rita Picken, Mary Shea, Emily Teeter, and Frank Yurco. In addition, special interest gallery tours organized by docent captain Debbie Aliber were offered by the docents every Friday morning during the months of July and August.
A new drop-in program for artists began this year—"Sketching in the Galleries" is now available every Wednesday evening. Interest in this program is growing; we hope to present an informal exhibit of sketches next fall. Drop-in tours, with no reservations needed, were also a regularly scheduled feature, taking place following the films shown on Sunday afternoons. In addition, the Sunday docents, led by captains Steve Ritzel, Teresa Hintzke, and Janet Russell, continued the popular thematic presentations begun last season. This year’s presentations included tours on “Love and Romance in Ancient Egypt” for Valentine’s Day, “Women in Ancient Egypt” for Women’s History Month, and “Sports and Games in the Ancient Near East” for Chicago Day.

Valentine’s Day provided the opportunity to begin a new series of free lectures for the general public. Co-sponsored by the Suq, Dr. John Foster, Professor of English at Roosevelt University, presented a reading of ancient Egyptian love poetry from his book Love Songs of the New Kingdom. In March, another holiday program celebrated Naw Rouz, the Persian New Year. Co-sponsored by the Nima Cultural Institute and Reza’s Restaurant, this event drew near capacity crowds for a reception, a special presentation on the holiday by Mahvash Amir-Mokri, and a slide lecture by Abbas Alizadeh. Last in the series was “An Age-Old Problem: Collection and Competition for Water in the Ancient Near East,” a lecture presented in April by Tony Wilkinson in conjunction with Earth Day.

Activities for children took some new directions this year, thanks to the on-going creativity of docents Kitty Picken and Annette Teaney. “Hijinks and Hieroglyphs,” a five-session history and drama class for children ages 7-12, resulted in a delightful public presentation in Breasted Hall. “Jewels of the Past,” a one-session workshop, invited children to see and discuss ancient jewelry on view in the museum and to create their own version of an Egyptian-style broad-collar necklace.

Summer tours for children have been a Thursday morning tradition since 1982. This year, Thursday captain Kitty Picken developed several new theme tours, followed by hands-on activities that allowed each child to take home a related craft project. Allison Wickens, a summer intern from Grinnell College, supervised this Museum Education program that served nearly two hundred children. Education staff also reached the community’s children with “museum-on-the-go” activities offered for youngsters at the 57th Street Children’s Book Fair and the Crossroads International Student Center Spring Fair.

A new program for children of University of Chicago alumni took place in June, when the Museum Education Program held two hands-on museum workshops for youngsters accompanying their parents to Reunion Weekend. Tours for adults were also offered, as they were for two other university events—New Students and Parents Orientation Day in September and the annual Humanities Open House in October. Outreach to the university community, begun last year, continued with our second New Students’ Open House, co-sponsored by the Suq. Also, university clerical support staff were invited to Lanny Bell’s second annual “Scribes and Secretaries of Ancient Egypt” tour on Professional Secretaries’ Day in April.

Much of the success of public programming depends on effective publicity. This year, Kaylin Goldstein, Programs Assistant, skillfully initiated a year-long publicity campaign that brought the museum’s programs more media attention than ever before. Assisted by William Harms of the University of Chicago’s News and Information Office and Emily Teeter, Assistant Curator of the Oriental Institute Mu-
seum, Kaylin used a desktop publishing program to produce and widely distribute a series of handsome brochures, flyers, press packets, and Museum Calendars of Events. Her efforts resulted in extended coverage in both university and Chicago-area media, including the University of Chicago Chronicle, the Maroon, and the University of Chicago Magazine, as well as the Hyde Park Herald, Chicago Parent, the Chicago Reader, Crain's Chicago Business, the Chicago Sun-Times, and the Chicago Tribune.

Thanks to Kaylin's efforts, Family Programs, a major Museum Education Program initiative, received excellent press coverage this past year. Funded by a generous two-year grant from the Elizabeth Morse Charitable Trust, the Family Programs project began with a half-year evaluation study by Jerome D'Agostino, a professional museum evaluator who is a Ph.D. candidate in the University of Chicago's Department of Education. This study has given us invaluable information on approaches for reaching families and for involving them in effective educational activities.

Each Sunday from October to June is Family Day at the Oriental Institute Museum, with activities that range from tours and hands-on craft activities to major special events. Storytelling, creative dramatics, “You Can Be a Pharaoh” video interviews, and “Ancient Earth,” featuring recycling activities for Earth Day were among the many programs offered this year. Special Family Program Events included: the Second Annual Mummy's Night on the Wednesday before Halloween and Discover Nubia! Day, which featured a recreation of a traditional Nubian village wedding. Performed by the Nubian Cultural Center of Canada, this festival of traditional music and dance came to us following acclaimed performances at the Royal Ontario Museum in Toronto. Other Special Family Program Events included Chicago Day, featuring activities highlighting the new exhibit “Sports and Games...
in the Ancient Near East," and the second annual Family Day, offered in conjunc-
tion with the Smart Museum of Art. It has been a rewarding experience to see how
these museum programs inform and inspire children and their parents as they dis-
cover the fascinating world of the ancient Near East.

Much of the success of the Family Programs Project is due to its staff—Mu-
seum Education Program interns Amanda Geppert and Bridget Baker and volun-
teers Adrienne Runge and Lisa Alswang. Supervising the entire program is Carol
Redmond, who joined the Museum Education Program as Education Outreach Co-
ordinator last fall. Carol holds an MFA from the Art Institute and is a skilled edu-
cator with experience at both the Art Institute and the Chicago Children’s Museum.
As Outreach Coordinator, Carol is also actively involved in supervising the Orien-
tal Institute/Chicago Public Schools Collaboration supported by the Polk Bros.
Foundation. It is a pleasure to have her with us.

In a year of growth and expansion, support and guidance is very much needed.
Thanks go to faculty and staff for generously sharing their knowledge and their
time. A special thank you to the docents for providing ideas, encouragement, and
support at every turn. Docent coordinators Cathy Dueñas and Terry Friedman of-fer Museum Education the same creativity and inspiration they provide to the Vol-
unteer Program. Janet Helman and Bud Haas remain invaluable mentors. The
interest and involvement of each and every one of you are the best assurances that
the Museum Education Program will continue to enjoy on-going success.

VOLUNTEER PROGRAM
Catherine Dueñas and Terry Friedman

This year marked a season of transition, challenge, and expansion for the Volun-
teer Program. After ten years of devoted service, Janet Helman decided to step
down from her position as Volunteer Coordinator to assume other volunteer re-
sponsibilities in the museum. Janet’s dedication and contributions to the program
will continue to be an inspiration to all of us.

In order to meet the Volunteer Program’s growing needs, the position of Vol-
unteer Coordinator is now shared by two people, Cathy Dueñas and Terry
Friedman, who are honored by the appointment and the opportunity to serve a pro-
gram that has accomplished so much over the past twenty-eight years.

Twenty volunteers participated in and completed the 1993 Spring Docent Train-
ing Course, making it of the largest classes in many years. We are grateful to the
faculty, staff, and graduate students who made the 1993 training session a success.
The people who made this possible were Lanny Bell, John Brinkman, Harry
Hoffner, John Larson, Mark Lehner, Rick Schoen, William Sumner, Emily Teeter,
Bruce Williams, and Karen Wilson. We would also like to extend our thanks to
Ray Tindel, Barbara Hamann, and Joe Scott, who offered both new and continuing
docents a very special tour of the basement at the culmination of the training course.
Everyone was able to see and understand how much work is involved in preparing
an artifact for display in a museum after it has come in from the field.

With an uncertain time table concerning the museum’s closing for renovation, a Spring Training Class was not held in 1994; however, we were able to maintain momentum by recruiting several new enthusiastic volunteers. They are Neveen Mekawi, who is a Tuesday morning museum docent; Evelyn Ruskin-Gordon, who assists Archivist John Larson; and Lisa Alswang and Adrienne Runge, who assist with Family Programs. Presently, plans are underway for a Docent Training Class to begin in September.

Public exposure and community awareness of the Oriental Institute and its Volunteer Program have been high priorities this past year. The docent coordinators became active members in a group called Volunteer Coordinators of Cultural Institutions. This spring the Oriental Institute hosted a meeting for this group. Volunteer coordinators from museums throughout the city and suburbs attended this gathering. Cynthia Echols and Carole Krucoff were the guest speakers at a round table discussion concerning fundraising issues in the 1990s. It was a golden opportunity to showcase the museum and to exchange some valuable information about mutual concerns and needs in non-profit organizations.

In April the Volunteer Coordinators attended the first Seven Sisters Volunteer Fair held at the Newberry Library. This event was sponsored by the Seven Sisters College Consortium as an effort to help inform alumnae and guests about volunteer opportunities available in the Chicago area. We were delighted to have a chance to recruit volunteers and distribute information about our program.

This year also saw our first United Way Heart of Gold Nominee, Georgie Maynard. Georgie attended a breakfast reception at the Palmer House Hotel where she received a citation for her years of dedicated service to the Oriental Institute and the Hyde Park Community.

Docent Day lecture and discussion sessions continue to attract large and enthusiastic audiences. This year’s topics covered a broad spectrum of ideas and interests, allowing us to explore some fascinating subject matter. Our volunteers laid the foundation for this inventive programming, offering valuable suggestions for Docent Day subjects and themes. Several museum docents drew upon their years of professional training and intellectual pursuits to offer substantive and enriching Docent Day presentations. Thanks to docents Dorothy Blindt, Erl Dordal, Lewis Ginsberg, Janet Helman, Rita and Kitty Picken, Larry Scheff, Mary Shea, and Carole Yoshida who shared with us their knowledge and expertise in many areas. We are also grateful to the faculty and staff who have devoted their time and energies to further our understanding of ancient Near East history, archaeology, and art. Without their support and willingness to instruct us, the Volunteer Program would not have the stature it enjoys today. For their participation in this year’s Docent Days, we offer our thanks and appreciation to: Abbas Alizadeh, Robert and Linda Braidwood, Cynthia Echols, Carol Meyer, Martha Roth, William Sumner, Emily Teeter, Tony Tomasino, Terry Wilfong, and Karen Wilson.
Our first collaborative Docent Day took place this past January with a joint venture co-sponsored by the University of Chicago Service League and the Oriental Institute Museum docents. Director William Sumner and Professors Lanny Bell and McGuire Gibson were the featured speakers, highlighting the Oriental Institute’s seventy-five years of scholarship and leadership in the field of archaeology.

This year our traditional monthly Docent Day format was expanded to include two field trips, enabling docents and volunteers to explore other educational opportunities outside Hyde Park. In August we enjoyed a day at the Spertus Museum “digging” on a “tell” in their Artifact Center. Everyone enjoyed the thrill of “hands-on” discovery. In April, which is also “National Volunteer Month,” the docents, along with some faculty and staff members, were treated to a rare viewing of the Sara Lee Corporation’s private art collection. Following a cocktail reception, Bob Eskridge, the curator of the collection provided us with a spectacular tour. It was a memorable evening of fine art and aesthetics.

No year would be complete without the Annual Holiday Docent Day in December. Members of the faculty, staff, and volunteers were honored to have Robert and Linda Braidwood present a retrospective on their Prehistoric Project. Following the presentation, everyone was invited to meet in the Egyptian Gallery for a delicious Middle East buffet lunch prepared by Cedars of Lebanon.

The holiday event was capped off with a surprise tribute to Janet Helman for her fifteen years of dedicated service to the Oriental Institute. To complete the day’s festivities a champagne/dessert reception was arranged to honor both Janet and the longevity award recipients. Our congratulations to this year’s honorees:

**First Year**

Bernadine Basile
Jane Belcher
Erl Dordal
Bettie Dwinell
Lewis Ginsberg
Irene Glasner
Ken Moore
Ira Hardman
Lorraine Kubiak
Michael Loveless
Johanna Lucas
Roy Miller
Kathy Mineck
Eve Weinberg
Denise Paul
Diane Posner
Deloris Sanders
Bernadette Strnd
Annette Teaney
Jane Thain

**Five Years**

Bill Boone
John Gay
Mary Grimshaw
Daila Shefner

**Ten Years**

Inger Kirsten
Beverly Wilson
Carole Yoshida

**Fifteen Years**

Muriel Brauer
Anita Greenberg
Janet Helman
Marsha Holden
Peggy Kovacs
Norma van der Meulen

**Twenty Years**

Sally Grunsfeld

Surrounded by proud family members, Janet Helman (seated) received a surprise tribute for outstanding volunteer service at the Annual Holiday Docent Day in December. Standing, left to right: Sarah, Bob, and Adam Helman. Photograph by Jean Grant
In Memoriam

This year marked the loss of three dear friends and devoted supporters of the Oriental Institute and the Volunteer Program. Carolyn Livingood passed away in January after a long illness. She was the creator and the driving force behind the development of the Volunteer Program. Her vision and boundless energy built the foundation upon which our program has grown and flourished these past twenty-eight years. Her legacy of hard work and determination has set a standard for us all. In April we were saddened by the death of Helen Glennon, who became a volunteer at the Institute in 1981. Helen served as a museum docent on Thursday afternoon, and also assisted in the Membership and Development Office. It is with great sorrow that we must also report the death of Teddy Buddington, who passed away in June after a lengthy illness. Teddy was a Tuesday morning docent and former captain. She was an avid amateur archaeologist and participated several seasons in the dig at Ashkelon, Israel, with Dr. Lawrence Stager. Teddy was also a loyal supporter of the American Institute of Archaeology and its many activities here in the Chicago Society.

In Retrospect

It has been a very busy and productive year. The activity in the Volunteer and Museum Education Office has increased considerably this year with the numerous programs and activities created for families and the Chicago Public Schools through grants from the Polk Bros. Foundation and the Elizabeth Morse Charitable Trust. Always ready to take on a new challenge, the volunteers have made significant contributions to the success of both of these programs.

As our numbers have grown, so have our interests. Within a single office, four sometimes five people work harmoniously to generate creative and innovative ideas. Our thanks and immense gratitude to Carole Krucoff, Kaylin Goldstein, and Carol Redmond for their endless patience and supportive help during these past months. We are particularly grateful to Kaylin Goldstein, the Public Programs Assistant, who spends much of her time scheduling our docent tours, arranging movie showings and informing all of us of last minute changes. We are also indebted to the Oriental Institute faculty and staff for their support and help in all facets of the program. To our three advisors Carlotta Maher, Peggy Grant, and Janet Helman, we would like to express our gratitude and appreciation for their wise counsel and strong voice of encouragement throughout this year of transition.

The Volunteer Program's work could not be effectively realized without the consistent and dedicated commitment of many people. Collectively and individually the volunteers do their jobs efficiently, dependably, and with great enthusiasm, whether they work "behind the scenes" or with the general public. As goodwill ambassadors, the museum docents help educate students and adults, making archaeology come alive. This year the docents conducted tours for 19,577 visitors who came to the museum. All the volunteers continue to expand their horizons, contributing their time, talents, and support to many vital aspects of the Oriental Institute's operation. The regularly scheduled volunteers for 1993–1994 are as follows:
Museum Docent Captains

Alice James
Larry Scheff
Nina Longley and JoAnn Putz
Lillian Cropsey
Kitty Picken
Elizabeth Spiegel
Debbie Aliber
Gloria Orwin
Georgie Maynard
Melanie Petroskey and Carole Yoshida
Teresa Hintzke and Steve Ritzel

Tuesday a.m.
Tuesday p.m.
Wednesday a.m.
Wednesday p.m.
Thursday a.m.
Thursday p.m.
Friday a.m.
Friday p.m.
Saturday a.m.
Saturday p.m.
Sunday

Two of our devoted docent captains have decided to step down: Tuesday morning captain, Alice James, and Friday afternoon captain Gloria Orwin. The new captain for Tuesday morning is Deloris Sanders.

Regularly Scheduled Museum Docents

<table>
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<tr>
<th>Nancy Baum</th>
<th>Ira Hardman</th>
<th>Dawn Prena</th>
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<td>Bernadine Basile</td>
<td>Marsha Holden</td>
<td>Patrick Regnery</td>
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<td>Jane Belcher</td>
<td>Barbara James</td>
<td>Barbara Rollhaus</td>
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<td>Christel Betz</td>
<td>Samantha Johnson</td>
<td>Joan Rosenber</td>
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<td>Dorothy Blindt</td>
<td>George Junker</td>
<td>Alice Rubash</td>
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<td>William Boone</td>
<td>Mary Jo Khuri</td>
<td>Norman Rubash</td>
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<td>Teddy Buddington</td>
<td>Barbara Klawans</td>
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<td>Charlotte Collier</td>
<td>Betsy Kremers</td>
<td>Laura Sanchez</td>
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<td>Erl Dordal</td>
<td>Judy Licata</td>
<td>Deloris Sanders</td>
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<td>Catherine Dueñas</td>
<td>Michael Loveless</td>
<td>Lawrence Scheff</td>
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<td>Bettie Dwinell</td>
<td>Johanna Lucas</td>
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<td>Kay Matsumoto</td>
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<td>Gordon Evison</td>
<td>Caryl Mikrut</td>
<td>Mary Shea</td>
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<td>Marilyn Fellows</td>
<td>Roy Miller</td>
<td>Daila Shefner</td>
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<td>Esther Fifield</td>
<td>Kathy Mineck</td>
<td>Bernie Shelley</td>
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<td>Shirley Freundlich</td>
<td>Ken Moore</td>
<td>Bernadette Strnd</td>
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<td>Joan Friedmann</td>
<td>Dorothy Mozinski</td>
<td>Annette Teaney</td>
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<td>John Gay</td>
<td>Jean Niblack</td>
<td>Richard Watson</td>
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<td>Anita Greenberg</td>
<td>Rita Picken</td>
<td>Eve Weinberg</td>
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<td>Mary Grimshaw</td>
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<td>Beverly Wilson</td>
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Substitute Docents

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<tr>
<th>Bud and Cissy Haas</th>
<th>Barbara Frey</th>
<th>Alice Mulberry</th>
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<tr>
<td>Betty Baum</td>
<td>Peggy Grant</td>
<td>Muriel Nerad</td>
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<td>Margaret Foorman</td>
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Suq Docents

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<tr>
<th>Sue Barker</th>
<th>Jo Jackson</th>
<th>Rochelle Rossin</th>
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<tr>
<td>Lois Cohen</td>
<td>Inger Kirsten</td>
<td>Mary Schulman</td>
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<td>Peggy Grant</td>
<td>Georgie Maynard</td>
<td>Mardi Trosman</td>
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<td>Janet Helman</td>
<td>Denise Paul</td>
<td>Norma van der Meulen</td>
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<td>Jane Hildebrand</td>
<td>Agnethe Rattenborg</td>
<td>Barbara Watson</td>
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<td>Ruth Hyman</td>
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### Museum Archives Volunteers
- Lilian Cropsey
- Sandra Jacobson
- Melanie Petroskey
- Evelyn Ruskin-Gordon
- Carolyn Livingood
- Joan Rosenberg
- Kay Ginther

### Registrar's Office Volunteers
- Debbie Aliber
- Peggy Grant
- Lillian Schwartz
- Judy Cherchi
- Mary Grimshaw
- Nicole Simpson
- Aimee Drolet
- Janet Helman
- Peggy Wick
- Leila Foster
- Georgie Maynard

### Photographic Laboratory Volunteers
- Maria Åhlström
- Irene Glasner
- Dawn Prena

### Education Office Librarians
- Debbie Aliber
- Irene Glasner

### Ceramic Restoration
- Elizabeth Tieken

### Assistants to Epigraphic Survey
- Diana Grodzins
- Carlotta Maher

### Assistants to Prehistoric Project
- Diana Grodzins
- Andrée Wood

### Suq Office and Stockroom Volunteers
- Georgie Maynard
- Eleanor Swift

### Membership and Development Office Volunteers
- Charlotte Collier
- Mary Jo Khuri

### Hittite Dictionary Project Volunteers
- Irv Diamond
- Irene Glasner
- Kathy Mineck
- Denise Paul

### Iranian Prehistoric Project Volunteers
- Peggy Grant
- Janet Helman
- Laura Sanchez

### Volunteers Emeritus
- Elizabeth Baum
- Laurie Fish
- Joan Rosenberg
- Calla Burhoe
- Carol Green
- Eleanor Swift
- Mary D'Ouville
- Sally Grunsfeld
- Vida Wentz
- Ida De Pencier
- Inger Kirsten
- Sally Zimmerman

### Museum Education and Family Programs Volunteers
- Lisa Alswang
- Bernadine Basile
- Adrienne Runge
- Raya Townsend
THE SUQ

Denise Browning

This has been a very busy year for the Suq. Besides our normal day-to-day sales we also participated in two book autographings, a weekend at the Newberry Library's Very Merry Bazaar and the Printer's Row Book Fair. We recorded the highest sales ever in a single day on the first day of our Holiday Sale in December, and our inventory sale in June is doing very well. With the possible closing of the museum for renovation we will be doing more and more outside activities, yet we plan to keep the Suq open during the entire renovation process.

This year we were very proud to develop a replica of one of our own cuneiform tablets. The original is a Neo-Babylonian tablet that dates to 560 B.C. and confers freedom to a slave family. Our replica is made of solid baked clay similar to the original process used to make clay tablets. We have also developed a beautiful blind embossed notecard from one of our Ptolemaic reliefs.

I wish to thank all of those who have made this year such a successful one. To all of our very loyal docents who give freely of their time, expertise and patience every week in dealing with our customers as well as those who fill in when necessary. Thanks! I don't say it often enough. Your work is greatly appreciated and very necessary for the operation of the Suq. Thanks to those who help behind the scenes with restocking and display, and to our students who often give more to the Suq than hours on a time card.

Loyal Regulars

Charlotte Collier Lorena Kubiak Ann Schumacher
Barbara Frey Agnethe Rattenborg Jane Thain
Jane Hildebrand Rochelle Rossin Norma van der Meulen
Ruth Hyman Mary Schulman Barbara Watson
Peggy Kovacs

Loyal Extras

Peggy Grant Jo Jackson Denise Paul
Janet Helman Mardi Trossman Sue Barker

Behind the Scenes

Jo Jackson Georgie Maynard Eleanor Swift

Newberry Volunteers

Lois Cohen Loraine Kubiak Lisa Stitzil

Jewelry Designer

Siobhan Ritchie Natalia Uribe Norma van der Meulen

Talented Staff

Florence Ovadia Paul Spruhan Siobhan Ritchie
Natalia Uribe Kate Sarther Minh Le
Overleaf. Removing slabs during excavation. Khorsabad, Iraq. 1929

The Oriental Institute
DEVELOPMENT OFFICE

Cynthia Echols

During 1993–1994 our Visiting Committee, Legacy Campaign Executive Committee, members, and volunteers led the Oriental Institute to new records in project support. We closed the fiscal year with $2 million raised in support of facilities improvements, bringing the Legacy Campaign cumulative total to $4.4 million. Outreach and project awards and contributions brought total dollars raised for the year to $2,767,000, a 42% (some $1.59 million) increase over totals for 1992–1993. We thank the many generous contributors who made these gains possible. We also thank the corporations (see Honor Roll, below) whose matching gifts advanced our program support.

Priorities for the year were: (1) financing climate control, expansion, and renovation needs through the Legacy Campaign; (2) raising the public profile and recognition of the Institute and its programs; and (3) exploring new sources of support and revenue streams.

The Legacy Campaign closed the first year of its five-year effort with 43% of the needed $10.1 million raised. In the pages following this section you will find the names of the Campaign’s Executive Committee, who played a key role in this most successful first year. We thank each of these individuals, in particular chairs Jill Carlotta Maher, O. J. Sopranos, and Ray Tindel. Donors to the Legacy Campaign are listed in the Honor Roll, below. We are most grateful to these individuals and corporations whose generosity and commitment to the Oriental Institute will ensure the preservation of our collections and the continued excellence of our programs and research initiatives. In May the Institute was awarded $900,000 from the National Endowment for the Humanities, Office of Preservation, in support of our climate control and renovation project. This grant was the third largest of all Preservation grants issued by the National Endowment for the Humanities this year and is the largest federal grant in the Institute’s history. It provides national recognition of the importance of our Museum and collections.

A second focal point for the efforts of the Development Office this past year was raising public awareness of the Institute. We thank Breasted Society member Roger Isaacs for introducing us to Deborah Gordon of DPG Associates who graciously and generously consulted with us on public relations on a pro bono basis. Meetings and consultations this past year resulted in plans to capitalize on 1994–1995 and our celebration of the Oriental Institute’s seventy-fifth anniversary. Plans include a gala dinner dance and silent auction on October 7, 1994 at the Hotel Inter-Continental with Robert McCormick Adams, former Director of the Oriental Institute and Secretary of the Smithsonian Institution, as guest speaker.

Our third focus this year was exploring new sources of funding and possible revenue streams for the long term. Discussions with new funding partners—among them the Rice Foundation, the MacArthur Foundation, and the Chicago Commu-
nity Trust—were initiated. Through the efforts of Visiting Committee member George Joseph we began exploratory discussions with Microsoft Corporation regarding licensing and digitizing of images from major museum collections.

I wish to thank the individuals who volunteered in the Development Office this past year: Charlotte Collier, Mary Jo Khuri, and Janet Helman. Their efforts—as well as their good humor—made the past year both successful and enjoyable in our office. Thanks! And those who serve on the Legacy Campaign Executive Committee deserve high recognition for their many efforts in support of our facilities improvement program. I also wish to thank Jim Alexander who introduced us to a number of Chicago area funders and so graciously and ably expanded the Institute’s network. Among the many docents who assisted with a variety of events and planning activities were Cathy Dueñas and Terry Friedman, our Volunteer Coordinators; Jane Belcher, Diane Posner, Masako Matsumoto, Bernie Shelley, and Larry Scheff. Many thanks to these and all the docents.

Our Visiting Committee met in November at the University Club courtesy of Marshall and Doris Holleb. Our spring meeting was postponed until early summer to fit with federal award announcement schedules. The committee’s suggestions and recommendations, as in years past, proved invaluable. With great sadness we report the death of Visiting Committee Vice Chair Carolyn Z. Livingood. Carolyn’s long years of service to the Institute have left a very memorable, enduring legacy for all of us. We will miss her leadership. Harvey Branigar, Jr., another long time committee member, passed away in the fall of 1993. We welcomed new committee members Crennan Ray and Patrick Regnery this past year. A complete Visiting Committee list follows this report.

We conclude 1993–1994 with more dollars contributed and pledged than in any previous year and with a growing network of community and media connections. All of our members can be proud of this record. We look to those members—their expertise, energies, and dedication—to help continue this pattern of growth and renewal in the year ahead.

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MEMBERSHIP OFFICE
Melanie Jansen

It has been a busy and enjoyable year for membership programming. In addition to the Wednesday evening lecture series, we co-sponsored two events with outside organizations: in February UC2MC (the University of Chicago alumni group) joined us for a lecture and gallery walk by Professor Thomas Brochu-Mudloff, an Egyptology graduate of the Oriental Institute, and in April, we cooperated with Earthwatch to bring Professor Philip Kohl, of Wellesley College, to the Institute to speak on “Armenian Origins.” Both events were very successful, bringing in many new people to the Institute. We plan on more joint ventures in the coming year.

The Membership Office also held several other events that were “out-of-the-ordinary”; the first, and certainly the most dramatic, was the James Henry Breasted
Society dinner on November 11, 1993. This festive event, which launched the Oriental Institute Legacy Campaign, took place in the Research Archives, which was transformed by striking floral and foliage decorations, balloons, and special effects lighting. University of Chicago President Hugo Sonnenschein and his wife, Beth, were the guests of honor.

We were very pleased to have Thomas H. Loy of Australian National University in Canberra with us on December 2 at the University Club in the Loop. Professor Loy, who has done work on the celebrated “Iceman” and with Robert and Linda Braidwood, gave a fascinating lecture to over one hundred people on “The Molecular Time Machine: Tracing DNA in Ancient Artifacts.” Afterwards, members of the James Henry Breasted Society joined Professor Loy for dinner and discussion of his work.

On January 23 Associate Professor Martha Roth, Assistant Editor of the Chicago Assyrian Dictionary, spoke to the Graduate School of Business Women’s Business Group. That same day at the Field Museum, Registrar Raymond D. Tindel, an expert on South Arabia, gave a brief talk about Yemen to a group of members and then took them through the photograph exhibit, “Yemeni Architecture: A Culture of Builders.” On March 31 some eighty associate members gathered at the University Club in the Loop for dinner with T. G. Harry James, Former Keeper of Western Asiatic Antiquities at the British Museum. Mr. James delighted the audience with tales of James Henry Breasted, Howard Carter, and the quest for antiquities in Egypt in the first decades of this century. And, in April, James Henry Breasted Society members Barbara and Philip Rollhaus hosted a Society reception featuring Assistant Curator Emily Teeter, who spoke about the recent recovery of the Medinet Habu notebooks.

February, March, and April initiated a new series: Associates’ Teas, behind-the-scenes tours of the Oriental Institute on Sunday afternoons. Conservators Laura D’Alessandro and Barbara Hamann, Head of the Computer Laboratory John Sanders, and Registrar Raymond D. Tindel took turns showing various, non-public aspects of the museum to Associate members. Each tour was followed by tea and a buffet provided by docent Mary Jo Khuri in the Director’s Study.

In May the Annual Dinner celebrated the excavations at Aqaba. Research Associate Donald Whitcomb, Director of the Aqaba Project, spoke to almost two hundred members and friends about the history of Aqaba and Islamic archaeology at the Oriental Institute. On the 31st, “Sports and Games in the Ancient Near East,” curated by Assistant Curator Emily Teeter, opened with a members’ reception and a chance to talk with Dr. Teeter and others involved with the exhibit.

The Membership Office was also pleased to help with two very special birthday parties for members of the James Henry Breasted Society: one for long-time Society member Petra Blix in July 1993 (arranged by her husband, Dr. Benjamin Gruber), and one for John Ansehl in April 1994 (arranged by Timothy G. A. Sohliberg, one of our newest James Henry Breasted Society members).

The Wednesday evening lecture series saw a fine cast of lecturers this past year. K. Ashhan Yener, the newest faculty member in the Oriental Institute and Department of Near Eastern Languages and Civilizations, presented the opening lecture in October. She spoke about the excavation at Göltepe, in the central Taurus Mountains of Turkey. In November Carol Meyer, former artist with the Epigraphic Survey, gave an update on the Bir Umm Fawakhir project in the Eastern Desert of Egypt. December saw the first of the Archaeological Institute of America co-spon-
sored lectures, featuring Mary Voight of the College of William and Mary, who spoke on the recent excavations at Gordion, Turkey. In January Gocha R. Tsetskhladze, of Balliol College, Oxford, talked about “International Relations in the Ancient World: Colchis and the Achaemenid Empire”; in February another distinguished scholar from England, Dorothy J. Thompson of Girton College, Cambridge, spoke on “Mummification on the Ptolemaic Necropolis of Memphis.”

In March there were two lectures, the first by Heather Lechtman of the M.I.T. Center for Materials Research in Archaeology and Ethnology. Dr. Lechtman gave a talk on Andean prehistoric metallurgy and the culture of technology. The second lecture was by Research Associate Donald Whitcomb, who updated the Institute on the recent excavations at Aqaba. In April, Karla Kroeper from the Egyptian Museum in Berlin visited the Institute to give the last lecture in the series, “A Step Out of the Darkness: the Delta at the Beginning of Pharaonic Egypt.”

This year’s Travel Program included the first of a new series of museum weekends, which feature Near Eastern collections in cities around the country. The first trip, “Egypt in New York,” led by Emily Teeter, was successful despite the very uncooperative weather in February. The Oman/Yemen/Bahrain trip in January, also led by Emily Teeter, was a great success. However, the trip to Jordan and Israel, scheduled for May 1994 and to be led by graduate student Timothy Harrison, was canceled because of the volatile political situation in Israel. There are several other trips scheduled for the forthcoming year, including a museum study tour to Paris and Berlin in November 1994, to be led by Curator Karen L. Wilson; a trip to Egypt in March 1995, to be led by Archivist John Larson; and a cruise to Egypt, Israel, and Jordan in November 1995. A museum weekend, “Egypt in Boston,” is slated for October 21–23, 1994, and will be led by John Larson as well. Other trips to Syria and Turkey are in the planning stages.

The Membership Office has profited greatly in the past year by close interaction with the following people: Thomas Urban in the Publications Office, who keeps News & Notes and the Annual Report on schedule and impeccably produced; Kaylin Goldstein in the Education Office, who serves as a design consultant and photographer for events; and Emily Teeter in the Museum, who gives generously of her time and expertise to the Travel Program. Many thanks also to our volunteers Charlotte Collier, who happily and graciously makes telephone calls, stuffs envelopes, and does other meaningful work; and Mary Jo Khuri, who helps with catering and development research.

Remember, the door to the Membership Office is always open; we encourage members to come to room 233 and share their thoughts and ideas with us whenever they are at the Institute.
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1993–1994 ANNUAL REPORT
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The Membership Honor Roll is arranged in alphabetical order within each membership level (sustaining and above). The Donor Honor Roll, also alphabetical, is divided by cumulative gift levels for fiscal year 1993–1994. All names are those of the legal donors as listed in the Alumni/Development Database System. We have made every effort to verify correct gift levels and donor names. Please contact the Membership and Development Office if you wish to make changes in your honor roll listing.

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