ACOR Newsletter
أخبار أكور

Vol. 4.2 — Winter 1992

Field Projects — The 1992 Season

The Cultural Resources Management Conference

Gaetano Palumbo

The protection, preservation, and presentation of cultural heritage in the contemporary world cannot be improvised. The rapid pace of development of many contemporary societies poses a serious threat to the survival of the remains of our ancient past. A comprehensive approach is required in order to adjust the needs of modernization and development to those of heritage preservation. This approach is known as Cultural Resources Management (CRM). CRM today, after years of experiments, successes, and failures around the world is a discipline that can be taught in schools and universities. It is a technique that can help not only people already involved in heritage preservation, but also developers and planners in meeting their objectives without delays, and in actually integrating cultural heritage into overall development plans.

The Department of Antiquities and ACOR have conducted a joint CRM program since 1987, under grants from the United States Agency for International Development (USAID). The results to date and plans for the future of the Cultural Resources Management Program were presented at a conference held in Amman Sept. 19-24, 1992, under the patronage of His Royal Highness Crown Prince Hassan bin Talal.

H.R.H. Crown Prince Hassan, Minister of Tourism and Antiquities Yanal Hikmat and ACOR Director Pierre M. Bikai at the opening ceremonies

Participants included Department of Antiquities and development agency officials, faculty from Jordanian universities, members of non-governmental organizations (NGOs) working on environmental and cultural heritage preservation, representatives of various municipalities, professional architects, contractors and consulting engineers. Three American guests presented their points of view on the U.S. CRM experience: Dr. Ricardo J. Elia, Director of the Office of Public Archaeology at Boston University,

Massachusetts, Dr. A. E. (Gene) Rogge, Director of the Intermountain Cultural Resources Service at Dames and Moore, Phoenix, Arizona, and Dr. Alan Simmons, faculty member of the Desert Research Institute in Reno, Nevada.

His Royal Highness Crown Prince Hassan opened the conference, stressing the importance of coordination between cultural heritage preservation and development. He called the attention of the audience to the new computerized catalogue of archaeological sites being developed at the Department of Antiquities with ACOR assistance: the JADIS program (Jordan Antiquities Database and Information System). Prince Hassan also called for more inter-departmental cooperation and for education in cultural heritage matters, and for the proper consideration of "human resources" as part of "cultural resources."

Dr. Bikai, Dr. Tell, H.R.H. Prince Ra'ad, Dr. Bisheh, and Madaba Society President Zawaideh at the first round-table

Two round-table discussions followed the conference opening. The first (at the Department of Antiquities), on the necessity of a balanced approach to development and cultural heritage preservation, was chaired by His Royal Highness Prince Ra'ad bin Zeid, and attended by representatives of NGOs such as the Friends of Archaeology, the Petra Trust, the Madaba Society, and the Royal Society for the Conservation of Nature. Also in the audience were representatives of governmental departments such as the Department of Environment, the Housing and Urban Development Corporation, the Ministry of Public Works and Housing and the Royal Scientific Society. During the discussion, the importance of standardized procedures of coordination between the Department of Antiquities and development agencies was underlined by several participants. This concern is leading to the signing of bilateral agreements between the Department of Antiquities and each of the major governmental development agencies, under the supervision and active involvement of Dr. Safwan Tell, Director General of the Department of Antiquities [see p. 5].

The second round table (at ACOR), with the participation of representatives of university departments of archaeology and architecture, discussed the problem of educational programs in CRM at high school and university levels. There are already some such activities, but a comprehensive approach is needed.

A final document was compiled and approved by all the participants in the round tables. This document calls for the creation of a Permanent National Commission for the Preservation of Cultural Heritage, for a National Master Plan for the protection of cultural heritage, for sustainable development of rural and urban centers, for the enhancement of the role of the Department of Antiquities, with adequate budget improvements, and for the support of the recommendations already formulated in the Environmental Strategy for Jordan.

A field trip was also organized by ACOR for our guests from the U.S.: we visited the Ministry of Tourism and ACOR's excavation and restoration projects in Madaba, directed by Dr. Cherie Lenzen and Mr. Ammar Khammash, Kerak Castle, Dana National Park (with the kind authorization of the Royal Society for the Conservation of Nature), and Petra. Along the road to Petra, we witnessed the destruction (due to the widening of a road) of Khirbet Akkuzeh, a large Iron Age fortress on the north rim of Wadi el-Hasa. On another trip, we visited Jebel el-Qal'ah and the Temple of Hercules, guided by Dr. Mohammed Najjar, director of the excavations, and Mr. Chryssanthos Kanellopoulos, in charge of the restoration of the temple. We concluded our field trips with a visit to Jerash and then to Irbid, where Dr. Zeidan Kafafi, Director of the Institute of Archaeology and Anthropology at Yarmouk University showed us the facilities of the institute and the Museum of Jordanian heritage. We also met with Dr. Ali Mahafzah, President of Yarmouk University, who invited us to a wonderful Jordanian lunch: food is definitely part of a nation's heritage, so it was quite natural to end our field trips exploring not just archaeological sites, but also the varied treats of a *mezeh*!

Pierre M. Bikai, Abdul Sami' Abu Dayyeh, Eugene Rogge, Gaetano Palumbo, Alan Simmons, and Ricardo Elia

The Stones of Petra

Thomas Paradise

The weathering of rock is simply its reaction to external forces such as sunlight, moisture and human activity. No matter how basic the causes of weathering, the exact mechanisms and rates of this deterioration continue to elude scientists.

The carved sandstone tomb facades of Petra are renowned for their astonishingly vibrant colors, unique patterns and beautifully executed architecture. Two thousand years of exposure, however, have left their mark and the deterioration of these structures has become obvious. Before proper conservation measures may be undertaken, theoretical weathering principles must be understood in order to aid in the correct application of chemical solutions to increase the integrity of the rock and to slow its breakdown. My research into this is currently ongoing at Arizona State University's Department of Geography. In a project funded by the National Science Foundation and an ACOR /USIA Fellowship, my study focuses on Petra's Roman Theater—a 6000 person theater carved directly from the valley cliffwall about A.D. 50.

Thomas Paradise at Petra's Roman Theater

The brownish-red sandstone of Petra contains various lenses and irregular beds of other siltstones, sandstones and cherts (chalcedony) with the Roman Theater containing twelve such bed anomalies. Using original Roman stone mason's marks, the weathered depths were measured and determined from neighboring areas of minimally weathered depths, with related data taken for direction (aspect), slope, climate, lichen cover, and annual sun exposure. Scanning electron magnification (SEM) and Energy Dispersive X-ray Analysis (EDXA) will be utilized to understand various minute sandstone components responsible for the disparate weathering rates.

Petra's Roman Theater represents an ideal outdoor laboratory since (i) it was directly hewn from the rock with precision as prescribed by the Roman builder/architect Vitruvius with original surfaces remaining or easily estimated; (ii) the arcing form of the theater exhibits 180° of aspect (northeast centered); (iii) numerous, varied sandstone beds are exposed at this single site; and (iv) Roman hydraulic engineering diverts water runoff from the neighboring cliffs around the theater, thus lessening the weathering effects of Jordan's winter rains. Preliminary results show large variations in weathering rates related to sandstone component variability with lesser influences due to topographic variables (sunlight, aspect, climate).

I will be returning to Jordan during the summer of 1993 on a USIA Fellowship at ACOR to continue research on rock weathering rates on the hewn Petra sandstone and the Umm Qais basalt.

Artemis Joukowsky becomes President of the Board of Trustees of ACOR

At its November 1992 meeting, the Board of Trustees of ACOR elected Artemis A.W. Joukowsky as the seventh president of the institution. Mr. Joukowsky comes from a business background, but both because he spent six years in Lebanon and because of his marriage to archaeologist Martha Joukowsky, he has long been involved in the archaeology of the area. He currently serves as Vice Chancellor of Brown University in Providence, Rhode Island. He has already begun making plans for ACOR's 25th anniversary celebrations.

ACOR's 25th Year: Commemorative Volume Planned

ACOR was founded in July of 1968. As part of the anniversary celebrations during the next year, ACOR is planning to publish a commemorative volume detailing the history of the first 25 years.

The editors of the volume hope to include not only documentary materials but also anecdotal and light-hearted materials and are requesting that those in the ACOR family who have photographs or stories from any of the 25 years which would be appropriate for such a volume, please send them as soon as possible to ACOR.

ACOR'S Development Projects

Petra

Following the discovery of a Byzantine church in Petra by the late Kenneth W. Russell (*ACOR Newletter* 4.1), archaeological excavations of the site began in late May and continue under the direction of Dr. Pierre Bikai with co-directors Drs. Zbigniew Fiema, Robert Schick and Khairieh 'Amr doing the actual work in the field.

The church is a tripartite basilica with an atrium to the west. The internal decoration includes well-preserved mosaic floors in both side aisles. The nave was originally paved with marble slabs which were robbed in antiquity, following a fire and the abandonment of the church. Among the finds are numerous marble objects, including marble chancel screens, as well as iron and bronze objects. There are also thousands of glass and stone tesserae which must originally have belonged to wall mosaics.

Thomas Roby and Fatma Marii brushing off the first of the mosaics uncovered at Petra

The excavations will continue through early 1993 after which measures will be taken to permanently protect the site and present it as a point of touristic attraction in Petra.

Madaba

The two shelters being built by Ammar Khammash are reaching their final stages. As an extension of this project, ACOR archaeologist Dr. Cherie Lenzen is excavating the Roman street, the Church of the Prophet Elias and the Burnt Palace in the Madaba Archaeological Park (the excavations themselves are funded by the Ministry of Tourism). As part of the CRM grant, Pierre Bikai is excavating a large cistern in Madaba—just next to the Church of the Map.

The excavation of a cistern in Madaba which may date to the time of the Emperor Justinian

Aqaba/Ayla

Donald Whitcomb

The excavations at the early Islamic site of Ayla continued during Fall, 1992. Staff consisted of four archaeologists and a surveyor; about 27 workers were employed. The excavation benefitted from the assistance of Ms. Sausan Fakhury and Mr. Mohammad Frehat of the Department of Antiquities, Aqaba. Finally and not least, these excavations could not have been successful without the assistance of Dr. Safwan Tell, Director General of Antiquities. Funding was provided from a grant from USAID to ACOR.

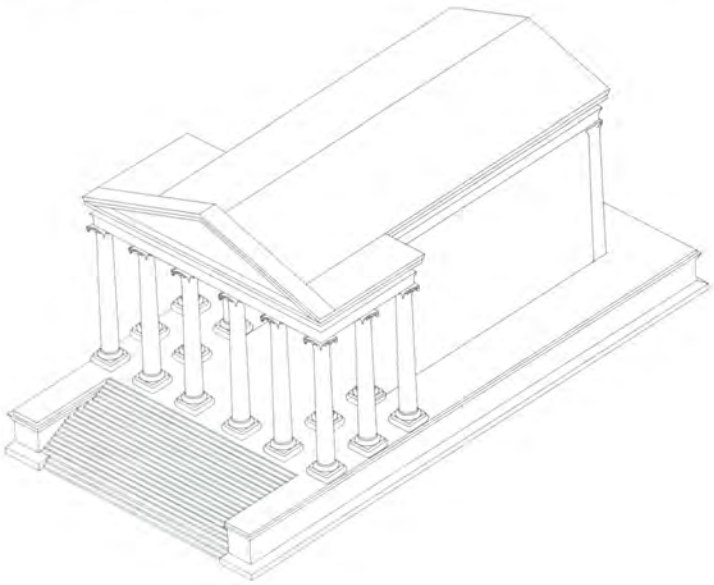
One of the goals of this season was the clearance of one of the main streets of the city. The Egyptian street takes its name from the Egyptian Gate, that is, the northwestern gate of Ayla. The street was a main axial thoroughfare connecting the gate with the Central Pavilion. The excavations cleared an average of 1.5 m depth, revealing the latest buildings fronting the street. The general character of these structures suggests residential units of the late Abbasid or Fatimid periods. A deep probe conducted in 1987 revealed that the original Umayyad street was much wider. Several side streets were partially excavated to facilitate movement of visitors. It is now possible to walk down the late Abbasid street and to visualize the character of this Islamic city.

The second goal of this season was clearance of the city wall which fronts the beach. This effort was complicated by the numerous palm trees growing, as we discovered, into the wall and by a thick covering of sand and modern debris. Nevertheless, the city wall was revealed along its entire southwest face. In the course of this work an interval tower, Tower 21, was excavated to a depth of almost 5 m. Perhaps more importantly, the southwest corner tower, Tower 22, was excavated. Not only do we now know the external shape of this tower, which is early Islamic and not Roman as some have reconstructed it, but the internal configuration has been revealed. The tower was divided into halves and one half excavated. The original doorway was a diagonal passage into the city. Next to this doorway

was an engaged column, part of the original building; the column was standing to its capital but leaning dangerously, so the upper portion was removed and placed in Aqaba castle.

This corner tower and the flanking walls and towers toward the north and east now provide a dramatic view of the site from the beach and the walkway along the beach. When the trees are removed and minimal reconstruction has been accomplished, the tourist monument will be integrated with the city park and public beach.

As an unexpected bonus for this season, the Abbasid *suq* (market) was discovered during the last days of excavation. We had noted that the interval tower, Tower 21, had been rebuilt as a square structure with two doorways. The building was divided by a brick partition wall and the rear part had brick storage bins. This conversion of the tower precisely parallels the history of the Square Tower, Tower 19, excavated in 1989. The explanation was provided by discovery of continuous walling from the corner tower to Tower 21. This wall was pierced by at least 6 doorways. We can now project a continuous series of small shops built along the beach and probably flanking both sides of the Sea Gate. In the Abbasid period, the city wall no longer functioned as such but became the backdrop for one of the main commercial centers of the Islamic city. Further excavation and preservation should present new and interesting aspects of Ayla.



C. Kanellopoulos's plan of the temple as it was probably constructed. The original design may have called for columns all around.

The Temple of Hercules

Chryssanthos Kanellopoulos has finished work on the podium at the back of the temple and has begun restoration of the foundation under the colonnade. In early December, three stones which will be used to replace Roman column drums too damaged to restore were moved in the middle of the night from the quarry to the site. Two of them weighed 15 tons and one an astounding 27 tons. They may be the largest stones moved from a quarry in Jordan since antiquity.

Newly-quarried stones for the temple restoration

Anthi Koutsoukou has been working on finalizing Kenneth Russell and Mohammad Najjar's manuscript on the excavations. Chryssanthos Kanellopoulos's manuscript on the architecture is finished and is being edited. These will appear, probably in late 1993, as ACOR Research Publications 2 and 3.

Cultural Resources Management

The CRM project is facilitating cooperation among various agencies on matters of cultural heritage preservation. On Dec. 21, 1992, an agreement prepared thanks to CRM mediation was signed by the Director General of the Natural Resources Authority (NRA), Mr. Kamal Jreisat, and the Director General of the Dept. of Antiquities (DAJ), Dr. Safwan Tell. Under it, NRA staff members will cooperate with DAJ in providing geologic profiles of archaeogical sites, as well as in seismic, remote sensing and petrographic studies. Geologists in the field will also report to DAJ new archaeological sites found during their surveys.

Mr. F. el-Qudha looks on as the agreement is signed by Mr. Jreisat and Dr. Tell

Field Projects: The 1992 Season

Wadi Ziqlab

E. B. Banning

Funded by the Social Sciences and Humanities Research Council of Canada, the Wadi Ziqlab Project continued excavations this summer at Tabaqat al-Bûma—a site near Deir Abu Sa'id, al-Kura—which has a Late Neolithic farmstead or hamlet overlying earlier colluvium containing Kebaran artifacts. The predominantly Canadian team also carried out soundings at nearby stream terraces of Wadi Ziqlab.

The Wadi Ziqlab Project began with a surface survey in 1981, and has continued with excavations, botanical and geomorphological survey, and sub-surface survey. In 1990 the focus of research was site WZ 200, Tabaqat al-Bûma, which the sub-surface survey discovered in 1987. In addition to the large, Late Neolithic cist-grave which the 1987 probe intersected, the 1990 excavations revealed architecture from three Late Neolithic structures and some terrace walls, with associated surfaces and the burials of three children and one infant.

In 1992 our goal was to uncover more of the Neolithic occupation of the site, to complete excavation of a partially exposed structure and to test for the presence of other structures, and to excavate the Kebaran deposits in Areas E34 and F34, which appeared to be near the center of concentration of Kebaran artifacts on the site.

In addition, we planned to obtain a somewhat wider exposure, and larger artifact sample at locality WZ 310, where probes in 1990 had intersected cultural material that seemed to overlap in time with the latest Neolithic use of Tabaqat al-Bûma, and to continue the sub-surface survey of the wadi terraces by small soundings.

At WZ 200, work in Area G34 in the interior of a partially exposed structure, soon revealed the outlines of a large, circular, plaster-lined hearth. The neighboring Areas G35 and H35 contained not only the missing wall, but also a neighboring, parallel wall, and had been pitted after abandonment of the room. In one case, a carefully slab-lined pit contained a child burial.

Areas E33 and F33 revealed a fourth structure. During the last use of the room, this structure had a cobble floor associated with an extremely large stone mortar. An earlier plaster floor seems to be associated with an earlier, demolished structure in this area. The pottery associated with this structure and some of the later deposits in other excavation areas includes a hard, black-burnished ware and occasional combed decoration. This pottery belongs to the end of the Late Neolithic, with parallels in "Wadi Rabah" sites. The discovery of "Wadi Rabah" material in good contexts that we can stratigraphically relate clearly to other phases at Tabaqat al-Bûma pleases us. A fifth structure, stratigraphically later than the fourth, was discovered in the southwest of the excavation field and seems to belong to the "Wadi Rabah" phase.

Excavations in Areas E34 and F34 were intended to try and find Kebaran artifacts in their discard contexts and any associated features. It now appears that most or all of the Kebaran artifacts in these areas have been transported along with the colluvium that underlies the Neolithic occupation. A stone feature below the Neolithic walls and deposits without pottery in Area F34, however, ultimately proved to be yet another large, slab-lined and slab-covered cist-grave, similar to the one excavated in 1987. Inside were the skeletal remains of a 15-year-old and a 6-month-old baby who had been wearing a dentalium-shell necklace when interred.

It now appears that we have at least three major phases of the Late Neolithic, each with distinctive architecture, pottery and lithics. The lowest phase, with single-leaf walls built of massive, squared limestone blocks, remains exposed only in a few areas, and we have little material to associate with the architecture. The next, with predominantly friable, salmon-colored ceramics and expedient lithics has structures built with smaller chert blocks and wadi cobbles, sometimes incorporating the earlier walls into parts of their foundations. These walls themselves show considerable alteration, rebuilding and reuse in later times along the northeast edge of the site, while there are also well built, rectangular rooms of the "Wadi Rabah" phase, associated with the dark burnished pottery, in the southwest part of the site.

As we had hoped, excavations at WZ 310 revealed evidence that this locality is a site with deposits that overlap in time those found at WZ 200. Very little architecture is preserved, and it seems likely that most of the site and its associated architecture was removed by road construction. Most of the lithics and pottery appear to follow closely those in the latest Neolithic phase at WZ 200. As excavation progressed, however, underlying deposits containing Chalcolithic and possibly even Early Bronze Age artifacts indicated that the Late Neolithic material in our sounding must be redeposited. It will require future soundings to try and find the source of this material.

Three new probes in stream terraces along 'Ayun al-Hammam and the lower Wadi Sumayl produced cultural material, although in relatively low densities, including Late Roman or Byzantine sherds and various lithics. One incidental benefit of excavations at locality WZ 313 was the discovery of flint-bearing breccias that may well have provided the source material for most of the lithics at site WZ 200.

In addition, two probes on the hill above site WZ 200 and one in the scarp across the road served to test for other areas where there might be *in situ* cultural remains,

especially of the Kebaran. The one in the scarp revealed a modern trench and mud-brick wall, buried beneath several meters of deposit (the result of a flood in 1975), as well as a lower hearth that awaits a date. The ones in the hill above the site recovered very little cultural material, so that we are still unable to determine the source of Kebaran artifacts on the terrace below.

Wadi el-Yabis

Gaetano Palumbo and Jonathan Mabry

The fourth season of fieldwork in Wadi el-Yabis was conducted in June and July, 1992. The project is sponsored by the U. of Rome, Italy, and the U. Arizona, Tucson, and is financed by the Italian Ministry of Foreign Affairs and the Italian National Research Council. The team included archaeologists and volunteers from Belgium, France, Italy, Jordan, U.K., and U.S.A.

This year's fieldwork had four components. In the first of these, soundings were conducted at Tell el-Meqbereh in the Jordan Valley which revealed almost five meters of archaeological layers characterized by domestic structures with well-preserved walls, floors, and hearths, dated between the 12th and the early 10th centuries B.C. The site was fortified, as evidenced by a wide stone wall exposed on the north side of the tell. The long sequence of Iron Age occupation which was found was quite unexpected, as the nearby large site of Tell Abu el-Kharaz does not show a similar occupational history.

Rock shelter in Wadi el-Yabis

The second sounding was conducted at the Neolithic village site of er-Rahib, near 'Irjan. This village is dated by the materials found to the Late Pre-Pottery Neolithic B period (PPNB), approximately 8500-8000 years ago. The corner and side wall of a structure with a thick plastered floor was found during the excavations. In a possible "garbage dump" found outside of the structure many animal bones and chipped flint tools were recovered. Among the retouched stone tools, Byblos, Jericho, and Helwan projectile point types were represented. Four pieces of obsidian were also found.

The third project was the intensive survey of three areas in the Wadi el-Yabis basin, which led to the discovery of 61 new archaeological sites. Most of them date to the Middle Paleolithic period (50,000-30,000 years ago), while many other sites found date to the Roman, Byzantine, Islamic, and Ottoman periods. A Roman fort which probably controlled the road from Pella to Gerasa was discovered on a hill near the village of Ba'un. A large Early Bronze Age (3,500-2,000 B.C.) cemetery was found on the hills above the Ghor. A survey was also conducted to identify the 19th century water mills between the villages of Rasun and Judeitta, along 8 kilometers of the Wadi el-Yabis stream, and human remains were identified in a section of an alluvial terrace. A complete mandible, 26 teeth, and few other bones were recovered. Geological features associated with the remains suggest a date close to the end of the Pleistocene, approximately 12,000 years ago.

The fourth project was the architectural and ethnographic survey of the village of Kurkuma, near the Jordan Valley, a small traditional village which is mostly abandoned today, but still used by the villagers of the nearby village of Hashemiya during the winter crop season. The village is characterized by various types of traditional rural houses, from the common arched house to the rarer pillared house, with pillars reused from the Roman-Byzantine ruins still preserved under part of the modern village. A map was made of the village, and some houses were selected for detailed plans and elevations. Ethnographic research included interviews with families still using the village and research into the agricultural practices of the area.

Tell Jawa

P. M. Michèle Daviau

The ruins on the mound west of the village of Jawa are called "the rock" by the local inhabitants but are known to archaeologists as Jawah (Glueck *AASOR* 14, p. 4) or Tell Jawa. The tell, whose ancient name remains unknown, is located ca. 10 km south of Amman near el-Yadoudeh. Survey by the Madaba Plains Project in 1981 confirmed Glueck's findings that the site was occupied periodically from the Early Bronze Age to the early Islamic period. Excavations began at the site in 1989 under the direction of Randall Younker. The second and third seasons (1991 and 1992) were directed by the author (see *ACOR Newsletter* 3.2, 1991).

During the 1992 season, investigation centered on the Iron Age casemate wall system. The wall was sampled in four areas: in Fields B and C on the south, Field B on

the west, and Field E on the north. Three well preserved casemate rooms were uncovered, one with a plastered cobblestone floor. By contrast, there was no evidence for a room near the southwest corner nor on the west side of the tell. Instead, the outer wall was strengthened by a tower that was built of extra large boulders (.75-1.00 m) and plastered on all faces. Between the tower and the west wall, 28 iron arrowheads were found embedded in earthen layers underneath the wall collapse. Unfortunately, it was not possible to determine whether the points were those of the defenders of the town or of its enemy because no connecting wall has yet been found that would establish the relationship of these structures to each other.

Area D at Tell Jawa

A similar situation existed on the south where a second tower was located beyond the limits of the casemate system. Between the south tower and the casemate wall was a well built four-room style house with at least one row of limestone pillars that supported the roof. High status artifacts and Ammonite black-burnished ceramic vessels, recovered from the flagstone floor of the southernmost, parallel room, constituted a food preparation assemblage. A second domestic area located inside the fortifications on the north (Field E) was exposed in a limited area. Here a room contained a shelf/bench set parallel to the inner casemate wall. On the shelf was a very fine collection of middle Iron Age II ceramic vessels, including storage jars, a red-slipped and burnished bowl, a krater with holes 1.5 cm in diameter in the base, and ground stone tools. Some of these tools were almost miniature (mortar and pestle) while others were full size. The broken base of a standing human figurine was among the finds.

The date of the final Iron Age occupation at Tell Jawa can only be determined by additional study of the ceramics. While an initial study suggested the end of the 9th century B.C. as a likely chronological position for the red-slipped bowls and juglets and the bag-shaped storage jars, additional exposure this season of the four-room house produced a large amount of black burnished pottery which dates to the late 8th-7th centuries B.C. Associated with this material was a Thutmosis III scarab found among the stones of the casemate wall.

Additional work along the east side of the Late Byzantine to Early Islamic building in Field D revealed a basement level room with a cooling area, considerable painted pottery, bones, charcoal and smashed glass vessels. In a neighboring room, over 500 stone tesserae were recovered, probably from a destroyed floor. In modern times, both rooms had been filled with *terra rosa* soil to the level of the upper thresholds. In a third room, the collapsed vaulting stones were still in place. The plan of the building continues to suggest a courtyard or atrium style house surrounded by rooms on three sides.

The quantity of painted pottery recovered this season adds considerably to the variety of types and styles recovered previously. An unusual find in Field D was an Umayyad ostracon incised in Cufic script bearing a prayer for forgiveness from one Ahmed bin Muqled. The finds from this building seem to suggest usage over a considerable period of time during the 7th-8th centuries A.D.

In 1992, the Tell Jawa Excavation Project was in the field from June 15-July 28. Continuing a happy tradition, the team resided at ACOR and benefitted from the personal and professional resources at the Center, especially Director Pierre Bikai and Dr. Patricia Bikai. The author was director of excavation and was assisted by Laurie Cowell, Margaret Judd, Heather Macmillan, Brenda Silver, Shawn Thompson, Julie Witmer and Michael Wood. Nasmieh Ride Tawfiq Darwish, representative of the Department of Antiquities of Jordan, gave generously of her time and expertise. The excavations, previously affiliated with the Madaba Plains Project (*AJA* 1992:519-20), were sponsored by Wilfrid Laurier University and funded by a grant from the Social Sciences and Humanities Research Council of Canada.

The Humeima Excavation Project

John P. Oleson, Khairieh 'Amr, and Robert Schick

The second season of the Humeima Excavation Project took place from June 20 through July 30, 1992. The project was once again funded by the Social Sciences and Humanities Research Council of Canada, and support for excavation of the church was provided by Dumbarton Oaks. The project director was Prof. John P. Oleson of the Department of Classics, University of Victoria; Co-Directors were Dr. Khairieh 'Amr of the Department of Antiquities of Jordan and Dr. Robert Schick.

Excavation in Field B100 in 1991 had uncovered the

eastern end of a large early Islamic complex centered around a large, earlier apse. Further excavation and surface clearing in 1992 revealed further details of the plan of the complex and provided information concerning chronology. It now seems likely that the apse in Room E formed part of a Byzantine church, one of the nave piers of which is visible in Room F. This structure

6th century burial at Humeima

was cleared out in the Umayyad period and subdivided into a structure with a southfacing courtyard, 20 m wide by 30 m long. At a later date, the complex was extended 10 m to the west, and two more rooms were added along the north wall. Later still, another room was added outside the west wall. All construction subsequent to the Byzantine period seems to be Umayyad or Abbasid in date, although there is some ceramic evidence that parts of the complex were occupied as late as Ottoman times. The function of the complex remains uncertain, although the numerous small rooms, the large amount of mammal and fish bones, and the recovery of coarse wares and *tabun* ovens suggests habitation.

Questions still remain as to the character of the structures that formed the core of the mound at the eastern end of the B100 complex. Probes in Room B in 1991 and in Room G in 1992 revealed the presence of substantial walls deep below the surface, possibly Byzantine in date, but extending into Nabataean levels. In addition, excavation through Islamic levels in the apse exposed a Nabataean level associated with a zig-zag mudbrick wall which was adjacent to an enigmatic cross-shaped feature built of well-cut but reused blocks. The function of the structures to which these walls belonged is still to be determined.

Excavation in the church (C101) in 1992 provided new information about that structure. The nave has now been entirely cleared, the foundation has been probed in the northeast room (sacristy?), and the entrance room along the north side wall has been opened up. It is now clear that there was an upper storey made accessible by stairs immediately adjacent to the north door and at the southwest corner of the south aisle. In addition, probes through the pavement in the nave revealed that the six crosses carved on several floor slabs indicated the presence of burials. Five undisturbed 6th century burials were recovered. These included a very tall and heavily built male in a wooden coffin and a young girl buried with her ivory doll and other toys.

This year's excavations also revealed the presence of a series of rooms built along the south flank of the church at a period subsequent to the original construction. These rooms seem to have been used for non-ecclesiastical functions such as tool storage and animal barns. Excavation in 1993 will focus on defining the character of the entrance room on the north of the church and of the other rooms around the periphery of the structure.

In Field F102, this season's excavation revealed further details of the complicated construction and occupational history of the large, early Islamic dwelling. The interior of the structure underwent extensive sub-division and rebuilding in the later phases of occupation, including some renovations as late as the Ottoman period. Penetration to the lower levels of occupation revealed several unexpected burials of the Byzantine period and provided evidence that there was intense occupation even of this peripheral area of Auara in the Middle Nabataean period.

Aerial view of the "caravanserai." Photo by J. W. and E. Myers.

The clearing of the surface of the so-called "caravanserai" in F103, and three probes in the structure yielded unexpected information. The structure is much larger

than first thought (approximately 46 m x 61 m, instead of ca. 45 m square), with rows of small rooms organized around a central courtyard. The complex now appears to be Umayyad or Abbasid in date, and the presence of painted wall plaster suggests that it may not have been purely utilitarian in character. It is at least possible that this structure—located on a prominent ridge above the settlement center and close to the hypothetical path of the *Via Nova*—may be the Abbasid palace known from texts to have been located at Humeima. An effort will be made in 1993 to elucidate the character and phasing of this structure which, at the very least, was one of the larger structures of early Islamic Auara.

Although excavation in the habitation area has not uncovered any well-defined Nabataean structures other than the cisterns, aqueduct, and reservoirs, the sampling of the rock-cut tombs carried out in 1992 revealed that there was indeed occupation at the site in the first centuries B.C. and A.D., as the literary texts suggest. No undisturbed burials were found, but rich samples of ceramics and other burial goods—including the first Nabataean coin found in the Humeima excavations—provided useful evidence for the chronology of the tombs. Some distinctions can already be made between early Nabataean and late Byzantine tomb design, but further sampling in 1993 should elucidate the chronological development of tomb design and burial habits, and the evolution of the necropolis.

Umm el-Jimal

Bert de Vries

The season's goals included mapping, architectural drawing of selected buildings, extensive photography on the ground, and low level aerial photography with cameras suspended from a balloon. The purposes of these recording activities were to provide illustrations and photos for a publication currently under preparation and to provide detailed plans and maps for a major excavation season to take place in 1993.

The surveyors made measurements of the Late Roman fort. Built ca. A.D. 300, the fort is an approximately 100 m x 100 m structure on the east side of Umm el-Jimal; it was already in ruins when the Byzantine town flourished in the 5th-6th centuries. The surveyors also laid out a triangulation grid in the Early Roman-Late Roman village. This is a site about 500 m x 300 m. in size, just to the east of the standing Byzantine ruins.

The archaeological architects studied four building complexes. These included House 119, a simple domestic structure with two well-preserved stables with mangers. This house is located at the entry to Umm el-Jimal, and is an ideal candidate for a visitors' center.

House 49, which includes the so-called Nabataean Temple, the object of clearing by the Department of Antiquities, was also carefully measured and drawn. It is important not only because it incorporated an earlier public building into a domestic environment, but also because it contains an L-shaped stable arrangement with a plan that illustrates the standard structural pattern of Byzantine houses on the site. The larger room was used to house untethered animals; it has a cubicle-like bathroom stall built into its northeast corner. The other room is long and narrow with a row of mangers running down the side connecting it to the first room. Here, animals could be tethered one per stall. The whole arrangement indicates careful attention was given to the sheltering of animals. The doors of the rooms opened onto a central courtyard where exterior stairs give access to upper rooms where animal fodder was stored and the human residents slept.

House 35, located in the same quarter, was studied to compare the building methods of the 5th/6th century Byzantine inhabitants with those of their Druze successors ca. 1925. The great room of this house is preserved to ceiling level. Its corbeled roof was supported on a wonderfully-finished central arch that allowed the ceiling to soar over five meters above the floor. A second room had an intact ceiling supported on the walls and an arch built by the Druze. This arch was relatively low slung, and constructed of reused building blocks of various sizes, aligned on the entry-side of the room. Although the makeup of the arch and the associated corbel-beam roofing system was more irregular than its Byzantine predecessor, it is clear that the Druze of the 20th century adopted the Roman-Byzantine building system with expertise. Thanks to them, many houses at Umm el Jimal have been preserved in their ancient style.

The highest wall of the Praetorium which has a bit of remaining gable roof at the southwest corner of the atrium has long been in extremely precarious condition. While the Department of Antiquities cleared previously excavated rooms, we numbered all the stones in the walls that are threatened by collapse. All threatened walls were then drawn and photographed which will allow the masonry to be dismantled and reconstructed.

Clearing by the Department of Antiquities and examination of specific buildings resulted in the discovery of a number of inscriptions and decorative stones. Recording these was a major component of the project. Over 50 inscriptions and five decorative fragments were drawn and photographed. Most of the inscriptions were tombstones in Greek using the formula: X (son or daughter) of Y of the age Z. Two were Nabataean.

The project staff consisted of Ambassador College Professor Dr. Ricky Sherrod and students Tania Hobbs, Irene Hart, Maria Murray, Hervé Irion, Edwin Orogo, Jason Yeats, Matt Gus, Rob Wilken; German high school student, Gregor Alpers; Calvin College Professor Bert de Vries and student Jana Sharpe; project administrator, Sally de Vries; and Department of Antiquities representative, Amjad al-Bataineh. Deepest appreciation goes to the Ambassador Foundation for financial support and the Department of Antiquities for logistical support and cooperation.

Aerial view of Petra Valley. The diagonal white line is the Roman road. Coming straight up from the road is the balloon's tether. To the right of the tether is the so-called Great Temple. Across the road from it is the Temple of the Winged Lions.

The Balloon Project

Bert de Vries

A highlight of the season was the aerial photography done by balloon. Two specialists, Dr. J. Wilson Myers and Mrs. Ellie Myers, were brought with their equipment from Greece in a joint effort by the Humeima [see p. 9], Petra, Madaba Plains and Umm el-Jimal projects. The Myers do low altitude aerial photography by suspending cameras from a balloon, with the shutter trigger and film advance operated by remote radio control. The cameras are suspended from a gimbal which keeps the lenses pointed straight down—no matter the pitch of the balloon. Because a surveyor's triangulation grid can be located on the photographs, it will be possible to produce maps of distinguishable features, such as exposed wall lines, in preparation for future excavations. ACOR acted as the command center as the Myers, their balloon, their cameras and bottles of hydrogen and helium moved around the country.

This balloon photography is a first for Jordan. It is expected that this method of remote sensing will add significant data to both that gathered on the ground and that available from overflights by airplanes and satellites. The Myers hope to return to Jordan in 1993 for work at other sites.

The balloon over ACOR's Petra project site. The el-Khubtha tombs are in the background.

Madaba Plains Projects

Lawrence T. Geraty

For six weeks last summer some 85 archaeologists, students, and specialists worked on what has become one of Jordan's oldest and biggest archaeological teams; it is sponsored by ACOR and a consortium of colleges and universities in the U.S. and Canada. I say "oldest" because the Madaba Plains Project, working between Amman and Madaba, inherited many of its core staff from the Hesban Excavation which began in 1968.

During our fourth season, in 1992, we continued excavation at Tell el-Umeiri, located just south of Amman along the airport freeway, as well as the hinterland survey of the territory within a 5-km radius of the site. We also initiated work for the first time at Tell Jalul, central Jordan's largest tell which is just east of Madaba.

At Tell el-Umeiri we concentrated on the western portion of the summit where impressive remains of the site's Iron Age (1200-500 B.C.) defenses have been exposed under the direction of Larry Herr, an archaeologist from Canadian Union College in Alberta, Canada. At the site's summit we excavated a casemate wall (a double defense wall with cross-walls that create rooms that are used for storage or as guard rooms unless they need to be filled with debris in times of emergency to make a strong, solid wall that will withstand onslaughts of the enemy). The wall was protected on the down slope by a beaten-earth rampart held in place above a dry moat by a retaining wall. It is the best example found to date of such a defense system. Dramatic evidence of a fiery Iron Age I destruction was found there and elsewhere on the mound. Beneath the Iron Age defenses, a Middle Bronze Age rampart is appearing. Within the walled summit, a number of large Iron Age II houses were found together with their typical assemblages of clay pots, stone implements, and other artifacts, including Ammonite ostraca and seals. On the slope of the mound to the south, domestic structures from Early Bronze II/III were also excavated.

Stephanie Merling of the Madaba Plains Projects

The "newest" part of our project was the commencement of digging at Tell Jalul under the direction of Randall Younker of Andrews University in Michigan. This aspect of the project promises to be a key to better understanding of the socio-historical development of central Jordan. The most interesting architectural finds there, within the eight field phases identified, were two extensive superimposed Iron II (7th to 9th centuries B.C.) pavements consisting of large flagstones heading up slope at an angle. They appear to be part of a paved approach ramp to a city gate with retaining walls preserved up slope. The best parallel to this is the similarly paved road leading up to the city gate at Tell Dan. Abundant ash suggests a massive destruction of a late Iron I (about the 10th century B.C.) settlement but definite occupational levels from this important site await our return next season.

The third part of our project we call the hinterland survey because this team, under the direction of Øystein LaBianca, also of Andrews University, investigates the area surrounding the two large mounds which we are excavating so that we can learn something of the context of these ancient towns. In previous seasons we have identified numerous remains of Iron Age agriculture. We have found that over the centuries there have been cycles of intensification and abatement in land use and settlement. How do we know? Methods of investigation have included environmental survey focusing on reconstructing changes over time in the physical landscape, ethnoarchaeological research examining the processes of sedentarization and nomadization at both the household and village level, archaeological survey aimed at documenting changes in settlement and land use and archaeological investigation of selected hinterland sites.

Two of the most interesting sites found by the survey included a group of typical Early Bronze IV/Early Middle Bronze tombs (early second millennium B.C.) that produced ceramic vessels and metal implements, as well as a site with an unusual inscription [following story-ed.].

After the season ended, several tombs dating to Early Bronze IV/Middle Bronze II were discovered accidentally on the south slope of the hill immediately south of Tell el-Umeiri East. The Ministry of Public Works was bulldozing the site in order to build a reservoir when the tombs were found and the Department of Antiquities was called in for a salvage operation under the direction of Muhammad Waheeb.

It is our hope to continue work at all of these sites in the summer of 1994. Those interested in participation or for further information should contact Dr. Doug Clark, Consortium Director, Madaba Plains Project, Walla Walla College, College Place, Washington 99324; phone: (509) 527-2456.

A New Safaitic Inscription

Øystein LaBianca

A Safaitic inscription from the period 100 B.C to A.D. 300, by far the largest ever found, came to light recently south of Amman. It was found by an archaeological survey team headed by Dr. Øystein LaBianca of Andrews University, Berrien Springs, Michigan, and Gary Christopherson, a graduate student at the University of Arizona. The survey team, attached to the Madaba Plains Project, discovered the ancient writing in an abandoned cistern which was entered in the course of a routine archaeological survey of the area around Tell Umeiri by Hanan Azar of the Jordanian Department of Antiquities and Dr. Dorothy Irvin, an archaeologist with the Madaba Plains Project.

Larry Herr, Dorothy Irvin, Øystein LaBianca and Hanan Azar in front of the inscription

The interior wall of the cistern, hewn out of the limestone bedrock in the Roman period or earlier, was sealed with an undercoat of plaster and then a layer of durable waterproof cement. The cistern fell into disrepair in antiquity and the space was apparently reused as an underground assembly room by the people who chiseled the letters. A black-painted panel, about a meter and a half wide, extends around the circumference of the cistern for a distance of about 16 meters, making this inscription the largest example known in the alphabetic Safaitic script. Generally such inscriptions are quite short, two to five words in length and contain six to a dozen or so characters. This inscription contains an estimated 1000 or more characters. The language of the script is a pre-Islamic antecedent of modern Arabic. Although the panel gives an overall impression of homogeneity, additions at several different times include words in scripts such as Nabataean, Thamudic, and modern Arabic, drawings in red paint, representations of animals and tribal logos.

The inscription has not yet been read, but inscriptions of this type usually contain names, genealogical information, verification of animal ownership, and memorials to the dead, as well as other short bits of information which shed light on the social organization of these literate yet nomadic tribes.

The Khirbet Salameh Field School

Pierre M. Bikai

Khirbet Salameh is located in Amman opposite the University of Jordan and across the street from ACOR. The site, which is at ca. 1020 m above sea level, is on a gentle slope overlooking a shallow crescent valley fed by a small seasonal spring called Ain el-Bayda. Some probes were made at the site at the time the ACOR building was constructed to determine the impact of the building on the site.

Excavation at Khirbat Salameh is a summer class in field archaeology for University of Jordan students. The team in 1992 consisted of 25 undergraduate students and 5 graduate students who were assigned as square supervisors. A photographer, foreman, architect and a driver were supplied by the university, as well as all the necessary equipment; 12 workmen were supplied by the Department of Antiquities of Jordan.

The site is divided into 5 m x 5 m squares. During 1992, 13 squares were excavated in a checkerboard pattern. The architecture uncovered so far indicates that the building is square, 23. 5 m on each side. The exterior walls are large, ca. 120 cm in width. The interior contains a number of rectangular rooms around a courtyard. There is evidence that the rooms in the building were used for various purposes e.g., for storage, work rooms etc. and there are indications that it was a farmstead. A preliminary study of the pottery suggests that there are four periods of occupation at the site: Iron Age (7th c. B. C.), Hellenistic (3d c. B.C.), early Byzantine and Ayyubid. The field school will continue in the summer of 1993.

Khirbat Salameh at the beginning of the season

Director's Report

Pierre M. Bikai

ACOR Activities and News

◆ So many projects were in the field last summer that ACOR was very busy. One day lunch was served to 67 people and most of them were being housed by ACOR in the building or in the rented apartment up the hill. ACOR was designed to house 30 people.

◆ International Executive Service Corps volunteer George Donovan, a retired hotel owner, analyzed ACOR's hostel operation for six weeks in August and Sept. He instituted a number of new procedures which should save staff time on registration and billing. His wife, Barbara Donovan, was 'volunteered' to help with the CRM conference, the newsletter mailing and organization of the fall reception. Thank you to both of them.

◆ Dr. Gaetano Palumbo did an excellent job of organizing the CRM conference and was applauded by the participants. The annual ACOR reception was held at the end of the conference.

◆ On Oct. 2, the ACOR family placed a tombstone on Kenneth Russell's grave at Petra. The stone was designed by Chryssanthos Kanellopoulos. It has now been determined that Ken had a fever of the *rickettsia* type, most likely Mediterranean Tick Typhus.

◆ An exhibit of photographs of Petra was held at the Amman Marriott on Oct. 18-24. This was sponsored by ACOR and the Marriott, underwritten by Wendy Jones and organized by Jane Taylor to benefit the Kenneth W. Russell Memorial Trust. The exhibit was under the patronage of H. M. Queen Noor and she opened it at a reception on Oct. 18.

◆ Dr. Branwen Denton, a graduate of Bryn Mawr, and Glen Peterman, a former USIA/ACOR fellow, have been appointed as ACOR Assistants to the Director. Dr. Robin Brown has been appointed ACOR's U.S. representative. She will be in the ASOR office in Baltimore.

From the Petra photo exhibit: "Sheik Sa'ad of the Bidul" by Vivian Ronay

Fellows in Residence

Two Arabic Speaking Academic Immersion Program scholars were in residence this fall, Frederic Cadora and Marion Katz. The USIA Fellows in residence are Timothy Harrison, U. of Chicago, who is doing a survey of Early Bronze Age sites on the Madaba Plains; Peter Warnock, U. of Missouri at Columbia, who is investigating olive domestication in Jordan; and John Roberts, U. of Chicago, studying the liberalization process in Jordan and the role of entrepreneurship in that process. Information about ACOR's fellowships can be obtained from ASOR, 3301 North Charles St., Baltimore MD 21218.

Jane Taylor, H. M. Queen Noor, Pierre Bikai, Joseph Khouri of the Amman Marriott and (far right) Wendy Jones at the Petra photo exhibit

Lectures at ACOR

Lectures in the past months included: "The Culture-Historical Approach and Moabite Origins," Dr. G. Mattingly; "Ground-Penetrating Radar and its Uses in Archaeology," Drs. J. Cole and G. Sandness; "Palestinian Pastoralism," Dr. D. Hopkins; "The Madaba Plains Project's Fourth Season," Drs. L. T. Geraty, L. G. Herr, Ø. LaBianca, and R. W. Younker; "Ancient Arabic Inscriptions of Jordan," Prof. F. Imbert; "Excavations at the North Shuneh Bus Stop," Dr. G. Philip; "The 1992 Survey and Excavations in Wadi el-Yabis," Drs. G. Palumbo and J. Mabry; "Taibeh: A Village in the South of Jordan," Ms. L. Fakhouri; and "Temple of Hercules Project: Amman Citadel," Dr. M. al-Najjar.

Library

Mrs. Barbara Haines donated the library of her late husband Byron L. Haines. Other donors included Abdul Hameed Shoman Foundation, A. Abdul-Rahman, A. Abou-Assaf, K. Arghandiwal and J. Taylor, P. and P. Bikai, J. Blazquez, R. Brown, M. Carter, B. Dabrowski, Department of Antiquities, R. Dornemann, A. Gazzawi, L. Geraty, A. Goldschmidt, B. Gould, N. Goussous, J.

Greene, K. Hamma, L. Herr, F. Jowkar, K. Jreisat, V. Karageorghis, N. Kershaw, S. Kubba, C. Lenzen, J. Mabry, B. MacDonald and R. Sampson, D. McCreery, P. McGovern, L. Marino, M. Meinicke, E. and C. Meyers, C. Miller, Mr. and Mrs. J. W. Myers, M. al-Najjar, E. Netzer, A. Ogilvy, J. Oleson, G. Palumbo, T. Parker, J. Peteet, F. Peters, M. Piccirillo, W. Rast, A. E. Rogge, V. Ronay, J. Strange, M. Toplyn, B. de Vries, P. Warnock, D. Whitehouse, D. Wimmer and F. Zayadine. Recent volunteers in the library included C. Erickson, N. Masri and H. Ayoubi.

Donors to ACOR

The following friends of ACOR assisted us over the last months: Ambassador Foundation, Mr. and Mrs. M. Ameen, Mr. and Mrs. H. Atsma, H. K. Beebe, T. Berner, J. Betlyon, R. G. Boling, R. Cunningham, M. Davies, C. Dennis, C. Detweiler, Dodge Foundation, B. Donovan, H. Forshey, L. Geraty, G. Grindstaff, J. Hackett, W. Hagel, A. Hallaby, P. King, Ø. LaBianca, Dr. and Mrs. G. Mendenhall, L. Maxwell, P. McGovern, P. Merkel, C. Miller, D. Miller, National U.S.-Arab Chamber of Commerce, V. Nichols, R. Old, J. Oleson, T. Parker, W. Rast, J. Schmidt, J. Schuldenrein, I. Shahid, E. Sherman, J. Tabor, Mr. and Mrs. M. Tarsha, B. and S. de Vries, J. and P. Williams, M. and S. White, and J. W. Zimmerman.

Donations to the Jennifer Groot Fellowship Endowment were received from P. and P. Bikai, B. Gould, T. Parker and B. and S. de Vries. Donations to the Kenneth W. Russell Memorial Trust and other donations in memory of Ken were received from: H.M. Queen Noor al-Hussein, R. Abu Jaber, K.'Amr, R. Atcheson, Mr. and Mrs. Z. Ayoubi, P. and P. Bikai, Amb. and Mrs. R. Bowker, T. Bradley, British Institute of Archaeology and History, R. Brown, J. Bussuttil, Mr. and Mrs. T. J. Caruzzi, Mr. and Mrs. J. Cecil, L. Cook, N. Craig, T. Dailey, B. Dajani, Department of Antiquities, Amb. P. Eyres, E. Feeny, Z. Fiema, J. Flanagan, Friends of Archaeology, M. van Geldermalsen, German Protestant Archaeological Institute, L. Harris and I. Halaby, Amb. and Mrs. R. Harrison, S. Harrison, N. Hering, M. Inoue, W. Jones, C. and A. Kanellopoulos, Mr. and Mrs. D. Keene, S. Kerner, Mr. and Mrs. R. Khouri, Kyle-Kelson Foundation, J. Lannert, N. Lapp, J. Lee, A. McQuitty, J. Mason, R. Mattersdorff, A. Mellott, Dr. and Mrs. G. Mendenhall, Mr.and Mrs. J. W. Myers, J. Oleson, G. Palumbo, T. Parker, G. Peterman, Petra National Trust, Promontory Chapter of USAS, I. Roddis, V. Ronay, R. Ryan, K. Sakishima, G. Saudi, D. Schaak, M. al-Sharif, J. Seigne, R. Shukairy, A. Simmons, S. Simms, Mr. and Mrs. W. Smallman, H. Swiny, J. Taylor, A. Villemain, B. and S. de Vries, and Mr. and Mrs. D. Wilkinson. Anonymous gifts were received in honor of Jane Taylor and of Mohammed and Larissa al-Najjar. A computer was received from P. Warnock and donations to the ACOR art collection came from Jan van Geldermalsen, Jaidah Khammash and Eathel Mendenhall.

Sa'id, Abed el-Fatah, Mohammed and Alaa Adawi

Eathel and George Mendenhall

Around the House

* At a festive lunch at ACOR on Dec. 6, Eathel and George Mendenhall celebrated their 49th wedding anniversary. Dr. Mendenhall was director of ACOR in 1975.

* The annual Christmas brunch for staff and their families was the highlight of the holidays. The bride of grants accountant Marwan Yassine, Shatha, was introduced. That evening, the Adawi family joined the residents for turkey dinner.

Marwan and Shatha Yassine, Patricia Bikai, and Nevene and Mohammed Tayyem at the brunch

Susan and Andrew Harrison and Gaetano Palumbo

* The simple card game UNO has swept the house and despairing cries of "Pass!" can be heard in the corridors late at night.

* The most junior scholar in residence this year is Andrew Harrison, aged 16 months, son of Susan and Tim Harrison. The more senior scholars have involved themselves with both language and dancing lessons for Andrew.

The ACOR Library Seeks the Following Out-of-Print Books

The ACOR Library urgently needs *Revue Biblique* 1 to 88 and 92: 2

Adelson, H. L.
1957 *Light Weight Solidi and Byzantine Trade during the Sixth and Seventh Centuries.* ANSNNM 138. New York.

Arab Organization for Agricultural Development
1976 *Agriclimatological Study of the Arab Countries: Jordan.* Khartoum.

Babelon, E.
1885-86 *Monnaies de la Republique Romaine.* 2 vols. Paris.

Bellinger, A. R.
1966-73 *Catalogue of the Byzantine Coins in the Dumbarton Oaks Collection.* 3 vols. Washington, D.C.

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Catalogue of Greek Coins in the British Museum, 1873-1927, nos.4: Seleucid Kings of Syria; 7: Ptolemaic Kings of Egypt;16: Alexandria and the Nomes; 24: Parthia; 26: Phoenicia. Reprint, 1965. Bologna: A. Forni.

Buccellati, G.
1967 *Cities and Nations of Ancient Syria.* Rome.

Carson, R. A. G.
1956 *Essays in Roman Coinage Presented to Harold Mattingly.* Oxford.

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1903 *Notes de Mythologie Syrienne.* Paris.

Elliott, D. C.
1974 *Ghassulian Culture in Palestine.* University of London.

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Hahn, W.
1973-81 *Moneta Imperii Byzantini.* Vols. 1-2. Vienna.

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1981 *Mammals of Arabia.* 3 vols. London.

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1960 *Ottoman Documents on Palestine, 1552-1615.* Oxford.

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1970 *Catalogue des monnaies byzantines de la Biblio-theque Nationale.* 2 vols. Paris.

Reifenberg, A.
1955 *The Struggle Between the Desert and the Sown: Rise and Fall of Agriculture in the Levant.* Jerusalem.

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1862 *Description générale des monnaies byzantines.* 2 vols. Paris.

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1932 *Prehistory in Palestine: a Bibliography.* Jerusalem.

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1912-14 *Monnaies byzantines.* 4 vols. St. Petersburg.

Waddington, W.
1904-12 *Recueil général des monnaies Grecques d'Asie Mineure.* Paris.

Wajda, G.
1958 *Album de paléographie arabe.* Paris.

Wroth, W.
1908 *Catalogue of the Imperial Byzantine Coins in the British Museum.* 2 vols. London.

Meryle Gaston, a member of the Library Commitee, serves as the 'clearing house' for donated books. She can be contacted at: 18 E. 8th St., No. 3B, New York, NY 10003, or at the E.H. Bobst Library, New York University, 70 Washington Square South, New York, NY 10012.

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