حضرة صاحب الجلالة الملك عبدالله الثاني ابن الحسين المعظم

كلمة العدد

عزيزي القارىء

إيماناً بالدور المنوط بدائرة الآثار العامة بالكشف عن آثار الأردن وتراثة والمحافظة عليه وصيانته وحفظه للأجيال القادمة فقد أخذت الدائرة على عاتقها الإستمرار بأداء هذا الدور بكل جد وإخلاص مستمدين عزيمتنا من رؤية القائد المفدى بأن الأردن أولاً وبأننا كلنا الأردن.

وسوف تجد عزيزي القارىء في هذا العدد تقارير موجزة عن مشاريع دائرة الآثار للعام ٢٠٠٦، المحلية منها والدولية، حيث أنجزت كوادر دائرة الآثار ثمانية وثلاثين مشروعاً بعضها دائم،الهدف منة تأهيل المواقع الأثرية وتطويرها لتكون مقصداً سياحياً يساهم مع المواقع السياحية الأخرى في رفد اقتصاد الأردن وتعزيزة. أما في مجال تعاون الدائرة مع المؤسسات الوطنية والمراكز الأجنبية في الأردن والبعثات من المؤسسات من مختلف دول العالم فقد أنجز أكثر من اثنين و ستين مشروعاً، وقد توزعت هذه المشاريع (المحلية والدولية) على مختلف مناطق المملكة، وبينت دراسة هذة المواقع مدى أهمية التنوع الحضاري الذي يحظى به الأردن إقليمياً ودولياً.

و ستجد عزيزي القارىء ملخصاً عن نشاطات الدائرة في مجال الندوات والمحاضرات والبرامج التدريبية وخاصة التي تعقد بالتعاون مع مؤسسات من مختلف دول العالم الهدف منها مواكبة المستجدات العلمية والتقنية في مجال الآثار لتبقى كوادر الدائرة على إطلاع بما استجد في هذا المجال.

رئيس التحرير

د. فواز الخريشة

مجلة منجزات

تصدر عن دائرة الآثار العامة

صندوق بريد ٨٨

عمان ١١١١٨-الأردن

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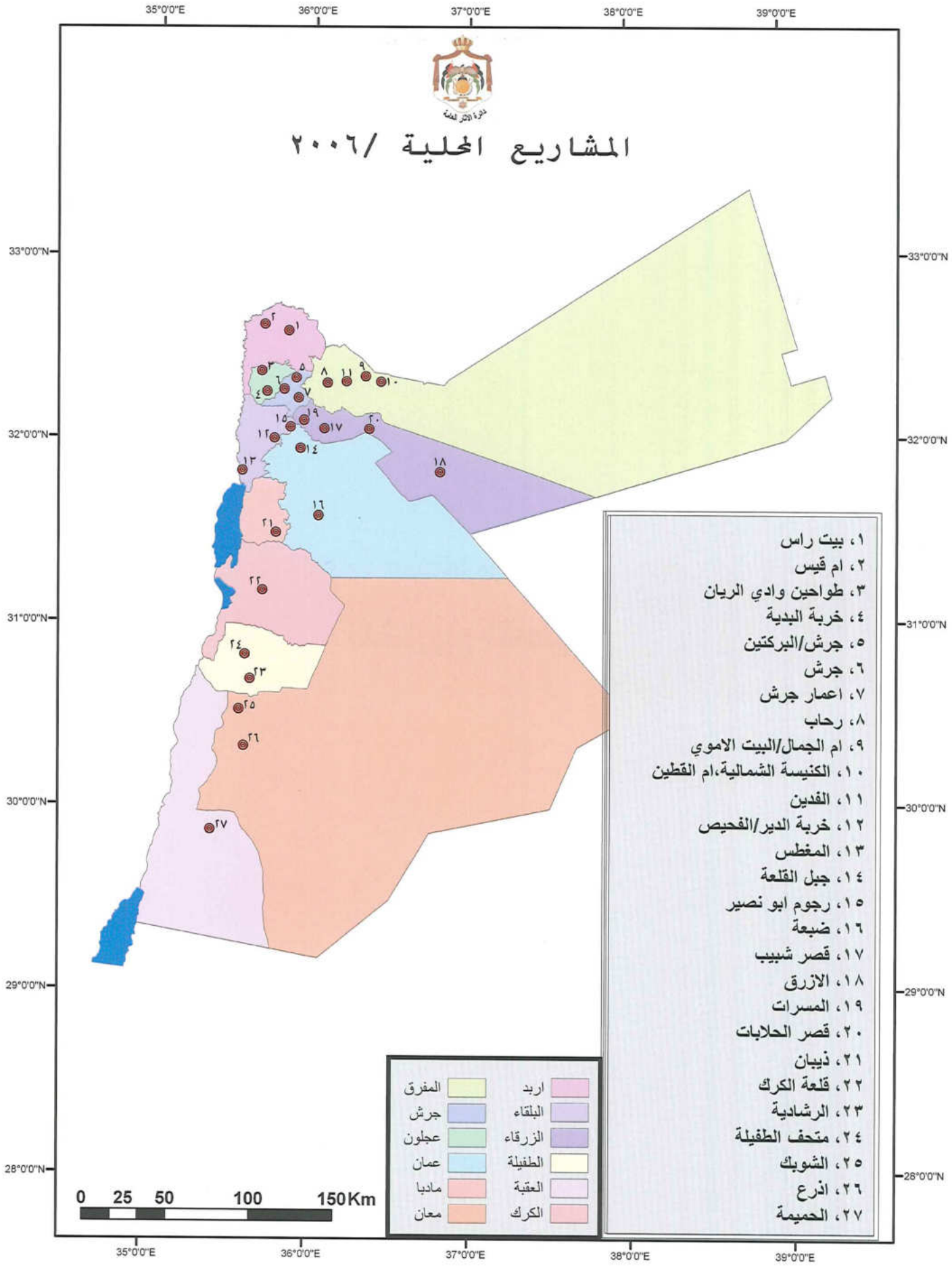
المحتويات

المشاريع المحلية

محافظة مادبا		
اقتلاع أرضية الجنة / متحف آثار مادبا	كاترينا الحمارنة	٣٨
صيانة و ترميم اللوحة الفسيفسائية / متحف آثار الجامعة الأردنية	كاترينا الحمارنة	٣٩
اقتلاع أرضية كنيسة لوط و بروقوبيوس / المخيّط	معهد الآباء الفرنسيسكان – مدرسة مادبا للفسيفساء	٤٠
صيانة و ترميم أرضية كنيسة الكاهن يوحنا الصغرى / المخيّط	معهد الآباء الفرنسيسكان – مدرسة مادبا للفسيفساء	٤١
صيانة و ترميم فسيفساء قبو زيوس / جرش – المرحلة الثالثة	كاترينا الحمارنة	٤٢
صيانة و ترميم فسيفساء كنيسة الكاتدرائية / مادبا	كاترينا الحمارنة	٤٣
صيانة و ترميم فسيفساء المتنزه الأثري	كاترينا الحمارنة	٤٤
تنقيبات تل ذيبان	باسم المحاميد وخالد الهواورة	٤٥
محافظة الكرك		
ترميم الواجهة الغربية لكنيسة داخل قلعة الكرك	خالد الطراونة ، ساطع المساعدة	٤٦
ترميم وصيانة قلعة الكرك	صدقي الحامد ، نوفل العجارمة	٤٧
محافظة الطفيلة		
تنقيبات الرشادية	جهاد درويش	٤٩
تطوير متحف الطفيلة	جهاد درويش	٥٠
محافظة معان		
صيانة و ترميم قلعة الشوبك	نوفل العجارمة، نبيل عديلات	٥١
ترميم و صيانة معسكر أذرح	هاني فلاحات	٥٣
محافظة العقبة		
ترميم المعسكر الروماني-الحميمة	سوسن الفاخري	٥٤
صيانة و ترميم قلعة القويرة	سوسن الفاخري	٥٥
نشاطات دائرة الآثار		٥٦

المشاريع المحلية /٢٠٠٦



المشاريع المحلية

أسم المشروع: تنقيبات ام قيس

مشرف المشروع: عماد عبيدات

تاريخ المشروع: ١/٤-٢٠٠٦/١٢/٣١

كلفة المشروع: ٢٥ الف دينار

عدد العمال: ٤٥عاملا

مصدر التمويل: موازنة دائرة الاثار

العمل والنتائج :

١-ساحة الندوة:

تم التعرف في هذا الموسم على شكل وابعاد الساحة فهي ذات شكل مستطيل باتجاه شرق غرب وبأبعاد ٥٧×٤٦سم استخدم في تبليطها شبائح من الحجر الجيري، وقد تبين فقدان جزء كبيرمن البلاط في منطقة الوسط والتي لاتزال تثير بعض التساؤلات حول الفترة التي نزعت فيها،وسبب نزعها من مكانها.

يحيط بالساحة أرصفة بسماكة ١,١٠م وينتصب فوقها أعمدة كورانثية ظهرت في الجهة الشرقية متساقطة إلى الجهة الغربية والتي من المعتقد أنها سقطت نتيجة زلزال القرن الثامن،أما بالنسبة للرصيف الجنوبي فقد ثبت من خلال الحفر فقدان جزء كبيرمنه وهذا يثيرنفس التساؤلات التي ارتبطت بفقدان بلاط الساحة.

ساحة الندوة

٢-الجهة الشرقية الخارجية من الساحة

وجد بقايا لعدة غرف استخدم في بنائها الحجر الكلسي المشذب على اساسات ترابية لم يتبق من جدرانها سوى مدماك أو مدماكين تضم بداخلها بقايا لطوابين ولا تزال أجزاء كبيرة منها واقعة ضمن المنطقة غير المحفورة والتي أظهرت القراءات الأولية للفخار فيها أنها تعود للفترات الإسلامية المتأخرة،وقد ثبت أيضا اسفل هذه الغرف وعلى بعد حوالي ١م وجود أرضية جصية وكميات كبيرة من بذور الزيتون المتفحمة وكميات كبيرة من الفحم والقرميد والتي يبدو أنها كانت تستخدم كمكان لحفظ الزيتون يعود للفترة البيزنطية حسب القراءات الأولية للفخار.

الجدار الواقع الى الجنوب من ساحة الندوة

٣- سور المدينة :

أظهرت النتائج الأولية وجود جدار إلى الجنوب من ساحة الندوة باتجاه شرق غرب بسماكة حوالي ٨٥سم مكون من أربعة مداميك استخدم في بنائها الحجر الكلسي المشذب على اساسات بازلتية حيث تم قطع الصخر الطبيعي لتثبيت الأساسات ولاعطائها قدرة اكبر على التحمل،أسلوب بناء الجدار وحجم الحجارة شبيه بسور المدينة الموجود في منطقة الأكروبول مما أعطى تفاسير أولية بأن هذا الجدار ربما يعود للفترة الهلنستية، إذا كان ممتدا على طول الساحة حيث ظهر في الموسم السابق امتداد له في الجهة الغربية من الموقع ولكن ظهور انقطاع يعطي آراء بأنه غير مكتمل البناء أو انه ظل مفتوحا لمساحة واسعة في المنطقة الواقعة مابين ساحة الندوة والحمامات الرومانية،وقد ظهر عند طرفه في الجهة الشرقية وفي أحد المجسات وجود إضافة لاحقة بنفس نوع الحجر الكلسي ولكن بأسلوب بناء مختلف،ويظل الجزء الأكبر منه مطمورا ضمن المنطقة غير المحفورة التي نحن بصدد حفرها في الموسم القادم.

الموقع قبل التنقيب

٤- المنطقة الواقعة إلى الشرق من المبنى المثمن:

النتائج الأولية للتنقيب في هذا المنطقة أظهرت بوادر لوجود مبنى لا يزال مجهولا لغاية الآن،ويمكن تأريخه للفترة الرومانية حيث ظهرت بعض الجدران المبنية حجارة كلسية مشذبة على اساسات بازلتية تشبه الممر باتجاه شرق غرب ويتقابل مع ممر آخر عند نهايته الغربية باتجاه شمال جنوب وما تزال الأجزاء الأكبر منه مطمورة تحت التراب ولكن ظهر لدينا إعادة استخدام له في نهاية الفترة الرومانية وبداية الفترة البيزنطية بشكل واسع لوجود قواطع في الممر وإضافة على الجدران واقامة البوابات التي استخدمت على الأغلب في الفترة اللاحقة لأغراض الخزين ودل على ذلك وجود عدد من جرار الخزين للسوائل المثبتة في التراب والتي لم يتبق منها غير الأجزاء السفلية.

الممر الى الشرق من المبنى المثمن

اسم المشروع: التنقيبات في بيت راس

مشرفا المشروع: وجيه كراسنة، سلامة فياض

تاريخ المشروع: ١/٤- ٢٠٠٦/١٢/٣١م

كلفة المشروع: ٣٩ الف دينار

عدد العمال: ٤٥ عاملا

مصدر التمويل: موازنة دائرة الآثار العامة

العمل والنتائج:

تعتبر التنقيبات في هذا الموسم استكمالاً للمواسم السابقة، والتي أسفرت عن الكشف عن معظم أجزاء المسرح باستثناء الأجزاء السفلية منه، حيث نقب في عدة مربعات للكشف عن الأجزاء المتبقية من منطقة تجويف المسرح السفلية المخصصة لمقاعد المشاهدين، وكشف عن مجموعة من المقاعد التي لا زالت في مكانها الأصلي، كما تم التنقيب في المنطقة الأمامية من الاوركسترا بهدف الكشف عن جدار مقدمة المنصة حيث لوحظ بان هذا الجدار قد أعيد استعماله في الفترات اللاحقة، وقد عثر في هذه المنطقة على قناة مفتوحة ومرتبطة بالنفق الذي يربط المسرح بالمنطقة الخارجة من الجهة الشمالية والذي ربما استعمل لغايات تصريف المياه من داخل المسرح الى الخارج.

احد الأقبية

منظر عام لمسرح بيت راس

اسم المشروع: المسح الاثري لمنطقة سدا لوحدة

مشرفا المشروع: وجيه كراسنة، سلامة فياض

تاريخ المشروع: ١٣/٨- ١٢/١٢/٢٠٠٦م

كلفة المشروع: ١٦ الف دينار

عدد العمال :٢٧ عاملا

مصدر التمويل : سلطة وادي الأردن

الموقع:

يقع سد الوحدة في أقصى شمال المملكة وعلى الحدود الأردنية السورية عند ملتقى أفرع نهر اليرموك مع بعضها البعض في منطقة المقارن، وقد كان الهدف من هذا المسح تسجيل المواقع الاثرية والمعالم التراثية التي من المتوقع أن تغمر بمياه السد.

إعمال المسح:

جرت إعمال المسح الأثري لتلك المنطقة ابتداء من جسم السد في المنطقة الغربية بعمل مجموعة من المجسات الاختيارية على طول الوادي، بالإضافة الى المسح البصري من خلال المسير على أطراف تلك المنطقة حيث عثر على بعض المباني التراثية التي ترجع الى نهاية الفترة العثمانية مثل محطة سكة الحديد وبعض المباني الأخرى الملحقة بهذه المحطة وبعض المباني الأخرى التي تعود الى النصف الأول من القرن العشرين، كما عثر أيضا على تل اثري يدعى تل الجميد حيث كشفت أعمال التنقيبات في التل عن مراحل إشغال سكني تعود الى العصر البرونزي الوسيط والمتأخر وبعض الكسر الفخارية التي تعود الى العصر الحديدي، كما عثر على مجموعة من المقابر المحفورة بالصخر تعود الى العصور البرونزية على السفح الشرقي للمنطقة المقابلة لهذا التل من الجهة الغربية، وقد تم توثيق من خلال رسم مخطط كنتوري لكامل المنطقة التي تم مسحها ومخطط كنتوري تفصيلي لتل الجميد مسجلاً عليهما جميع المعالم الأثرية والتراثية.

منظر عام لتل الجميد

منطقة المسح

بعض اساسات البناء التي تعود للعصر البرونزي

اسم المشروع : تطويرواعادة تأهيل طاحونة عودة / الريان

مشرف المشروع : م. أمجد البطاينه

تاريخ المشروع : ١/٧ـ ٢٠٠٦/١٢/٣١م

كلفة المشروع : ٥٠٠٠ دينار

عدد العمال : ٧ عمال

مصدر التمويل : موازنة دائرة الآثار العامة / وزارة التخطيط

العمل والنتائج:

بعد الإنتهاء من مرحلتي إعادة البناء والترميم في عام ٢٠٠٤م وتشغيل آلة الطحن عام ٢٠٠٥م تم في هذا العام المباشرة بمشروع تطوير وإعادة تأهيل محيط طاحونة عوده حيث تم انجاز كافة الأعمال الخارجية والمتعلقة بتطوير محيط الطاحونة سياحيا حيث تم إنجاز الآتي:

١. بناء درج حجري محاذي للطاحونة لسهولة الصعود والنزول بطول ٣٠ مترا طوليا.
٢. تنفيذ (درابزين) خشبي لمنطقة درج الطاحونة لتسهيل حركة الزوار والحفاظ على سلامتهم بطول ٣٠ مترا.
٣. بناء جدران إستنادية بشكل يتلائم مع الموقع وتراثيته بطول ٤٠ مترا.
٤. تبليط مجرى الوادي وأكتافه بطول ١٠٠ مترا.
٥. بناء قناة فرعية بطول ٢٥ مترا لتصل القناة العلوية القديمة مع الطاحونة.
٦. تنفيذ قناة مياه أنبوبية بقطر متر وبطول ١٥ متر تحت منسوب الطاحونة للتخلص من المياه الداخلة الى الطاحونة وتصريفها في مجرى الوادي.
٧. بناء أرصفة حجرية أمام الواجهة الرئيسية للطاحونة بطول ٣٠ مترا.
٨. بناء مقاعد حجرية للزوار خارج الطاحونة تتسع لحوالي ٣٥ شخصا.
٩. بناء جسر حجري امام الطاحونة يربط طرفي القناة لتسهيل العبور للزوار وأصحاب البساتين في الوادي.
و بناء لوحات إرشادية باللغتين العربية والانجليزية مساحة الواحدة منها ٢ متر مربع.

اسم المشروع: التنقيبات والصيانة والترميم في البدية

مشرفا المشروع: ابراهيم الزعبي، زياد غنيمات

تاريخ المشروع: ٢/٧/-٣١/١٢/٢٠٠٦

كلفة المشروع: ٢٠ ألف دينار

عدد العمال: ٢٠ عاملاً

مصدر التمويل: وزارة التخطيط

العمل والنتائج:

١- تنظيف الموقع بالكامل.

٢- تغطية الأرضيات الفسيفسائية في موقع راس الدير لحمايتها من العوامل الجغرافية.

٣- صيانة وتقوية جدران الغرف المكتشفة في موسم (٢٠٠٥) واقتصرت أعمال الصيانة والتقوية على إضافة مادة رابطة بين حجارة الجدران، و روعي في هذه الخلطة تناسبها وتناسقها مع طبيعة الموقع الأثري.

٤- صيانة وتقوية جدران الكنيسة المكتشفة عام (٢٠٠٥) في منطقة رأس الدير

اعمال الصيانة والتقوية لبعض الجدران

التنقيبات

تركز العمل في المنطقة (F) لاستكمال ما تم الكشف عنه في الموسم السابق(٢٠٠٥) حيث تم فتح سبعة مربعات (٥×٥م)٠ وفيما يلي وصف موجز للمكتشفات في هذا الموسم.

اولاً: الكشف عن حجرة كبيرة مستطيلة الشكل،في الجدارين الشمالي والجنوبي للحجرة مدخلان يتراوح عرضهما (من ٧٠سم - ٨٠ سم)، استخدمت في الفترة الأيوبية والمملوكية لأغراض السكن والتخزين .

ثانياً: الكشف عن قبو يتكون من صفوف حجرية متراصة بجانب بعضها على شكل أقواس مبنية غير منتظمة (ريش)، ويبلغ عدد هذه الصفوف والأقواس (١٧) صفا والتي بمجموعها تشكل سقف القبو الذي يرتكز على اربعة مداميك بكل جانب، وهذا القبو من نوع الأقبية الاسطوانية يبلغ ارتفاعه من الداخل (١٤٠سم) وطوله (٥٤٠سم)،و الحجارة المكونة لهذا القبو قد تم تغطيتها بطبقة بلاستر(قصارة خشنة)، ويبدو ان هذا القبو استخدم لغايات التخزين ولم يتعرض لأية انهيارات في جميع جوانبه .

ثالثاً: الكشف عن غرفتين وجد بداخلهما خمسة أفران (طابون).

رابعاً: الكشف عن بئر ماء في احد الحجرات، محفور بالصخر، ويعلوه خرزة مثبتة من الحجارة غير المنتظمة و حوضان حجريان للمياه يعلوان الخرزة.

طوابين

إحدى الغرف المكتشفة

اسم المشروع: اعادة تعمير جرش

مشرف المشروع: عبد المجيد مجلي

تاريخ المشروع: ١/١- ٢٠٠٦/١٢/٣٠

كلفة المشروع: ١٥٠ألف دينار

مصدر التمويل: موازنة دائرة الاثار العامة

أولاً: - قوس النصر (بوابة هيدريان)

-المرحله الاولى:-

١- توثيق البناء بالتصوير والرسم كما هو في الواقع ودراسة الأجزاء التي تحتاج إلى صيانة .

٢- تصوير ورسم الحجارة ذات العلاقة بهذا البناء الموجودة في الموقع فرزها وتصنيفها وترقيمها وإعدادها لعملية الترميم .

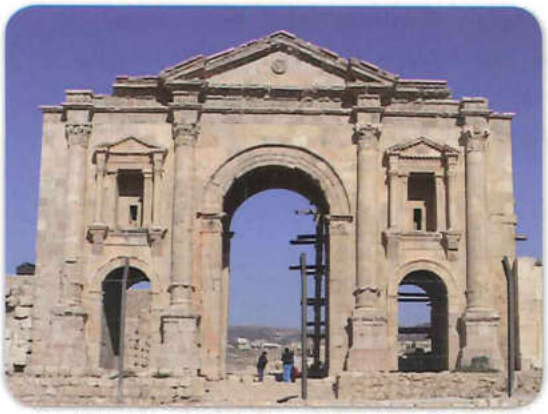
٣- بناء سقايل خشبية على هذا البناء وحقن الجدران الآيلة للسقوط وتثبيتها وفك الجدران المتصدعة بعد توثيقها وترقيمها .

٤- بناء مداميك الواجهة الخلفية حيث لوحظ أن البناء عام ٢٥٠م بناءاً على وجود قطعة عمله في المدماك ا لخامس ، كما لوحظ بأن المونه المستعملة في الأجزاء العلوية تختلف عن الجزء السفلي ، حيث أستعمل في الركه الداخلية مادة طين وكتل حجرية و بعض أجزاء من الكرنيش ، أما في البناء الأصلي فقد أستعمل مادة الشيد ورمل السيل والرماد .

٥- تقوية الواجهة الأمامية (الجنوبية) من جميع الجوانب وترميم المداخل الثلاثة والشبابيك التي تعلوها وأنصاف الأعمدة الواقعة على جانبي الباب الشرقي والغربي وترميم الباب الرئيسي والعقد الأوسط من الداخل و رفع التاجيات العلوية لأنصاف الأعمدة والمداميك المكرنشة والمثلث الذي يعلو هذه الواجهة وأبعادها (٤٠, ٢٥م × ٧٠, ١٧م× ١٧, ٩م).

٦- ترميم الواجهة الشمالية ذات الأبواب الثلاث والشبابيك والمشابهة للواجهة الامامية وترميم الأعمدة النصف دائرية ونحت تاجيتين حديثتين لعدم وجود التاجيات الأصلية في الموقع ، ولا تزال أعمال الترميم مستمرة في الجزء العلوي .

قوس النصر الواجهة الجنوبية الامامية اثناء الترميم



قوس النصر الواجهة الجنوبية الامامية بعد الترميم

ثانياً :- ملعب سباق الخيل (الهيبدروم)

١- استكمال ترميم الغرفة رقم (٢) والقائمة على عشرة عقود متداخلة وترميم الواجهة الأمامية لهذه الغرفة وتكحيل المداميك الداخلية لهذه العقود.
٢- إزالة الطمم المتراكم في الغرفة رقم (٤) وإظهار وترميم الأرضية الفسيفسائية العائدة إلى الفترة البيزنطية والواقعة خلف بوابة هيدريان من الناحية الشمالية وشرق مبنى الهيبدروم .
٣- ترميم مداخل الغرف رقم (٣+٤+٥) ورفع عقدين داخليين في الغرفة (٣) .
٤- ترميم مداميك الجدار الغربي بطول (٦ م) .

ملعب سباق الخيل / الغرف المحيطة قبل العمل

ثالثاً : - البوابة الشمالية

١- إزالة الأعشاب والأشجار والطمم المتراكم على جسم البوابة الشمالية والواجهتين الشمالية والجنوبية والمنطقة المجاورة لإظهار الحجارة الخاصة بالبوابة .
٢- توثيق الواجهات الأمامية والخلفية بالرسم والتصوير والترقيم ودراسة عناصر البناء من جميع النواحي .
٣- فك المداميك المتصدعة حتى المدماك الأول وتنظيف جذور النباتات من داخل جسم البوابة .
٤- بعد هذه الأعمال لوحظ أن هناك اختلافا بين الواجهة الشمالية والواجهة الجنوبية حيث أن الصدفة العليا للكوات في الواجهة الجنوبية ترتكز على تاجيات كورنثية وترتكز صدفة الواجهة الشمالية على رأسية مكرنشة و المواد المستعملة في جسم البوابة كتل حجرية غير مشذبة والطين من التربة الحمراء .
٥- ترميم خمسة عشر مدماكا في الواجهة وترميم الكوات وأنصاف الأعمدة والتاجيات القائمة على جوانبها ، وللبوابة الشمالية مدخل واحد للمشاة والعربات في حين أن البوابة الجنوبية لها ثلاثة مداخل الأوسط للعربات والجانبيان للمشاة.

ملعب سباق الخيل / العقود التي تشكل سقف الغرف

البوابة الشمالية / الواجهة الشمالية اثناء العمل

اسم المشروع : تنقيبات البركتين / جرش

مشرف المشروع : محمد البلاونة / موس ملكاوي

تاريخ المشروع : ١٦ / ٤-٣١ / ١٢ / ٢٠٠٦

كلفة المشروع : ٢٣ ألف دينار

عدد العمال: ١٥ عاملا

مصدر التمويل: موازنة دائرة الاثار العامة، وزارة التخطيط

العمل والنتائج :

- الكشف عن قنوات تصريف المياه خارج المبنى من الجهة الشرقية، ومن خلال الكشف عن هذه القنوات تبين أنه قد تم استخدام الشقوق الطبيعية في الصخر كقنوات لتصريف المياه.
- إنهاء الكشف عن الزاوية الشمالية الغربية من الحمام و هي بناء مستطيل الشكل، جميع جهاته مصمتة يشبه البرج في التصميم وفي وقوعه على زاوية المبنى ويعتقد أنها خزان لتجميع المياه .
- استكمال التنقيب في مبنى الحمام ومعاملته كوحدة معمارية وليس على أساس نظام الترنشات (المربعات)، وهذه الخطوة جاءت استكمالاً لأعمال التنقيب في المواسم السابقة ٢٠٠٢، ٢٠٠٥م وقد تم إعطاء الغرف أرقام بشكل مؤقت كما هو بمخطط البناء إلى حين معرفة ماهيتها ووظيفتها.
- التنقيب في الغرفة رقم ٤ وتبين أنها تمثل الغرفة الرئيسة في مبنى الحمام (الغرفة الساخنة) وأبعادها ٥,٩م×٥,٤٥م وتم الكشف عن أعمدة مبنية من أقراص القرميد الدائرية التي أقيمت على أرضية من القرميد المربع الشكل، وعلى

الغرفة الساخنة

الجوانب بنيت مصاطب بشكل صناديق من القرميد الصغير الحجم، و معزولة عن بعضها البعض وقد ترك بينها مسافات ضيقة ومتفاوتة.

- التنقيب في الغرفة ٥ وإزالة الطبقة الفسيفسائية التي لا تحمل أية رسوم أو زخارف وهذه الطبقة كانت في حالة سيئة وقد تم عملها في فترة لاحقة لبناء الحمام ومستواها أعلى من مستوى الغرف الأخرى، وتم الكشف عن قناة لتصريف المياه في الجانب الشرقي من الغرفة وحجارة مشذبة جاءت نتيجة لانهيار السقف والجدران وقد استخدمت كأساس للأرضية الفسيفسائية في الفترة اللاحقة ولم يكتمل العمل فيها.

- العمل في الغرفة ٣ أبعاد (٥,٩×٥,٤٢م) ، والكشف عن أعمدة صغيرة بنيت من أقراص القرميد الدائرية المقامة على قاعدة من القرميد مربعة على أرضية مبلطة بالفخار على غرار الغرفة الساخنة ٤، بالإضافة إلى وجود مصاطب ولكن أقل عدد من مصاطب الغرفة الساخنة ٤، وقد استخدمت الأعمدة لرفع أرضية مبلطة بالقرميد، كما عثر على باب صغير يعلوه عقد نصف دائري والباب قليل الارتفاع يعتقد أنه يستخدم لتزويد الغرف الساخنة بالمياه والوقود، وتتصل الغرف مع بعضها بمداخل ولكل غرفة مدخلان للدخول والخروج بشكل دورة مكتملة، وتشير الدلائل إلى أن العتبة السفلى للمداخل على مستوى الأرضية التي تحملها الأعمدة في الغرف.

- تسقيف الغرفتين ٣، ٤ بألواح معدنية تقوم على عوارض خشبية ومعدنية (جسور حديدية) ترتكز على الجدران وبدون قواعد أرضية لحماية الغرف من العوامل الجوية كالأمطار تجنباً للتلف.

- إزالة الطمم في الغرفة ٢ من الجهة الغربية للكشف عن الجدران من الجانب الغربي والجانب الشمالي الغربي والجنوبي الغربي، وتم التنقيب في الغرفة ولم يكتمل العمل بها.

- الكشف عن مقبرة في الجهة الجنوبية الشرقية خارج مبنى الحمام وجدارين إحداهما منتظم البناء باتجاه شرق غرب وجدار آخر غير منتظم باتجاه شمال جنوب موازي للقطع الصخري، وقد غطيت القبور ببلاطات حجرية ضخمة وسميكة ١٥٠سم×٦٥سم×٢٥-٣٠سم، وغطيت القبور بأربع بلاطات من نفس الحجم تقريباً مكسرة لم يبق منها إلا بلاطة واحدة لا زالت في مكانها، وعثر في هذه القبور على كسر فخارية وعظام، ومن خلال طراز بناء الجدران المحاذية للقبور ومن خلال كسر الفخار تبين أن هذه القبور تعود للفترة الرومانية.

مبنى الحمام اثناء اعمال التنقيب

اسم المشروع : التنقيبات في المصلبة الشمالية / جرش

مشرفا المشروع: محمد البلاونة / ناجح ابو حمدان

تاريخ المشروع : ١ /٧ -١٠/١٠/٢٠٠٦

كلفة المشروع:١٦ الف دينار

عدد العمال : ١٠ عمال

مصدر التمويل: موازنة دائرة الاثار العامة

كان الهدف الرئيسي من إجراء التننقيبات في المصلبة الكشف عن استمرارية شارع الديكامانوس في المنطقة الشرقية باتجاه الحمام الشرقي.

العمل والنتائج

تم تقسيم العمل إلى أربع مناطق أساسية كل منطقة تم عمل عدد من المربعات كانت على النحو التالي :

المنطقة B

-الكشف عن جدار يمتد من الشرق إلى الغرب حجارته جيرية مشذبة متوسطة وكبيرة الحجم والكشف عن حجارة للشارع متآكلة قليلة العدد بالإضافة للكشف عن قناة فخارية مكتملة تقريبا.

- تم الكشف عن جدار في الزاوية الغربية يتكون من صفين ومدماك واحد وجدار آخر يتجه شرق غرب يقع في منتصف المربع يتكون من صف واحد ومدماك واحد وحجارته جيرية.

- الكشف عن أرضية ذات حجارة كبيرة ومتوسطة الحجم و جدار يتجه شرق غرب يتكون من صف واحد وخمسة مداميك حجارته جيرية مشذبة.

الموقع قبل التنقيب

المنطقة A

- الكشف عن جدار حجري يتجه غرب شرق مكون من ثلاثة صفوف اسفل منه ظهر صف واحد من الحجارة الذي يبرز عن الصفوف التي تعلوه والبروز الثالث تكون من صف واحد من الحجارة ومدماكين وحجارته جيرية مشذبة منتظمة الشكل.
- الكشف عن درج من ست درجات متتالية منحدرة باتجاه الجنوب.
- الكشف عن جدار مكون من صفين وعدد من المداميك تتراوح ما بين (٢-٣) مداميك. وكشف عن درج يمتد من الجهة الشمالية باتجاه الجنوب مكونة من أربع درجات متتالية.
- الكشف عن جدارين يقع أحدهما في الجهة الجنوبية يتجه شرق غرب وأربعة مداميك والثاني في الجهة الشمالية يتجه شرق غرب واحتوى الجدار على صفين في المنتصف تقريبا يتكون من خمسة مداميك وثلاثة صفوف وعثر على أنبوب فخاري اسطواني الشكل يتجه شرق غرب طوله ٣ م.

أحد الجدران اثناء العمل المنطقة D

المنطقة C

- الكشف عن صف من الحجارة ومدماك واحد يتجه شرق غرب و جدار يتجه غرب شرق عدد الصفوف ما بين (١-٢) وعدد المداميك ما بين (٢-٣).

المنطقة D

- الكشف عن ستة أعمدة أسطوانية الشكل وقاعدتها مربعة بالإضافة إلى صف من الحجارة يتكون من مدماك واحد.
- الكشف عن أرضية حجرية من الجهة الجنوبية هشة ومتآكلة.
- الكشف عن أرضية أخرى فيها فتحة دائرية (مصرف) مغطاة. والكشف عن أرضية فسيفسائية غير ملونة.

أهم النتائج

- عدم ظهور أي استمرارية للشارع الديكامانوس.
- العثور على عدد من قطع العملة.
- العثور على العديد من الحجارة المزخرفة وتاجيات أعمدة.
- العثور على كسر متعددة للأسرجة الجرشية والعثور على قطع من الأصداف.
- الكشف عن رواق الحمام الذي احتوى على مجرى مائي. وعن قنوات فخارية.

أسم المشروع: التنقيبات في الكنيسة الشمالية وملحقاتها / أم القطين

مشرفو المشروع: ناصر خصاونة، حسين السرحان، خالد الجنايدة

تاريخ المشروع: ٢٤/٦-٣٠/٩/٢٠٠٦

عدد العمال: ٣٠ عاملاً

كلفة المشروع: ١٠ الآف دينار

مصدر التمويل: وزارة التخطيط

اعمال التنقيب:

١- نفذت في هذا الموسم تنقيبات لثلاث غرف محاذية للكنيسة من الجهة الجنوبية حيث أظهرت أعمال التنقيب إن هذه الغرف بنيت في فترة بناء الكنيسة البيزنطية المبكرة وأعيد استخدامها في الفترة المملوكية الأيوبية.

٢- عمل مخططات جديدة للكنيسة وملحقاتها بعد إظهار المعالم الرئيسة في هذا الموسم.

الصيانة والترميم:

١- ترميم وقائي للباب الذي يربط الكنيسة بالغرفة رقم ٤ وإغلاقه وتدعيمه لغايات الترميم المستقبلي لحماية جدران الكنيسة من الانهيار.

الغرفة رقم ٢ قبل العمل

... بعد العمل

أسم المشروع: الصيانة والترميم في رحاب

مشرف المشروع: عبد القادر الحصان

تاريخ المشروع: ١٥/ ٣ – ٣١/ ١٢/ ٢٠٠٦

كلفة المشروع: ٤٩ ألف دينار

عدد العمـال: ٥٠ عاملاً

مصدر التمويل: دائرة الآثار العامة

أ- أعمال الصيانة والترميم:

١. بناء درج وجدار استنادي لمدخل الكهف الأسفل لكنيسة القديس جورجيوس.

٢. تسييج كنيسة القديسة مريم وعمل باب حديدي لها.

٤. البدء بترميم جدران كنيسة القديسة مريم من الجهات الثلاث الشرقية والغربية والشمالية و استكمال بناء الجدار الشمالي من الداخل والخارج بارتفاع خمسة مداميك بطول ٢١م و بناء جدران الواجهتين الشرقية والغربية بما فيهما البوابة الأمامية والحنية بارتفاع أربعة مداميك.

٥. استكمال فك وتركيب جدران المسجد الأيوبي – المملوكي من الخارج مع التكحيل و إعادة تركيب القوس الذي يعلو البوابة.

٦. ترميم وصيانة جدران كنيسة القديسة بروكوبيس وخاصة "الحنية" والغرفة الشمالية والجدار الشمالي بارتفاع أربعة مداميك، وصيانة الفسيفساء المدمرة مع إعادة بناء أعمدة الأقواس الوسطى وهذه الكنيسة تعود للعصر الأموي والكشف عن كامل أرضيات الصحن الأوسط.

٧. إعادة ترميم وصيانة جدار بلدة رحاب القديم والعائد للعصر البرونزي المتأخر بامتداد عشرة أمتار وارتفاع ١٦٠سم.

٨. استكمال أعمال التنقيب في المجمع الكنسي والكشف عن أجزاء كنيسة القديس يوحنا المعمدان وصيانة أرضياتها وجدرانها كاملة، بالإضافة للكشف عن باقي أجزاء كنيسة القديس بروكوبيوس والعثور على بئر داخل الكنيسة ضمن الجناح الشمالي له قناة تمتد إلى الخارج، معظم أرضيات هذه الكنيسة مدمرة لإعادة الاستخدام في العصور العباسية المتأخرة والأيوبية – المملوكية ولم يبق سوى شريط كتابي أمام الحنية وزخارف هندسية ونباتية تحيط به، علماً بأن تاريخ الكنيسة يعود للعام ٥٩٨م.

كنيسة العذراء

المسجد المملوكي

كنيسة القديسة بروكوبيس

اسم المشروع : ترميم وتأهيل البيت الأموي - أم الجمال

مشرف المشروع: محمد علي الخطيب

تاريخ المشروع : ١/٧ – ٢٠٠٦/١٢/٣٠

كلفة المشروع: ٢٠ ألف دينار

عدد العمال : ٣٣ عامل

تهتم دائرة الاثار العامة في موقع أم الجمال من عدة سنوات ، حيث قامت بأعمال التنقيبات والدراسات والترميم .
وفي هذا الموسم استمر العمل في ترميم البيت الأموي وتأهيله لاستخدامه كمركز زوار يضم مكاتب ومتحفاً وخدمات للزوار.
تركز العمل في هذا الموسم في المنطقة الجنوبية الغربية والغربية للمبنى، حيث استمرت عملية فك بعض الجدران لتردي وضعها وإعادة بنائها وتقويتها وإعادة بناء الجدران المنهارة.

الواجهة الجنوبية الغربيةبعد الترميم

الواجهة الغربية بعد الترميم

اسم المشروع : صيانة وترميم الفدين

مشرف المشروع : جميل المساعيد

تاريخ المشروع : ١/٨- ٢٠/٩/ ٢٠٠٦م

كلفة المشروع : ٢٠٠٠ دينار

عدد العمال : ١٥ عاملاً

مصدر التمويل : وزارة التخطيط

العمل والنتائج :

تركز العمل على أعمال التنظيف والصيانة والترميم لموقع الفدين الأثرى بحيث تم العمل في المناطق التالية من الموقع:

١- القلعة العثمانية : تنظيف داخل القلعة وخارجها

٢- الكنيسة البيزنطية:

تنظيف الكنيسة من الأتربة والحجارة المتراكمة ومن ثم جمع المكعبات الفسيفسائية تمهيدا لترميمها في الأرضية وتم عمل صيانة وقائية للأرضية الفسيفسائية من خلال تثبيت بعض المناطق التي تدمر جزء منها.

٣- تنظيف موقع المسجد الأموي وبعض المباني المرفقة بالمسجد من الحجارة المتساقطة والأتربة.

٤- تنظيف وتعزيل المناطق المحيطة بموقع الفدين.

٥- تنظيف مبنى الحمامات الأموية.

الحمام الاموي بعد الترميم

الكنيسة بعد العمل

القلعة العثمانية

اسم المشروع: الصيانة والترميم في آثار المغطس

مشرف المشروع: رستم مكجيان

تاريخ المشروع: من ١/٥/ ٣٠/١١/٢٠٠٦

كلفة المشروع: ١٥ ألف دينار

عدد العمال: ١٤ عاملا

مصدر التمويل: موازنة دائرة الآثار العامة

سير العمل:

أعمال الصيانة

تعتبر أعمال الصيانة والمتابعة الدورية لجميع المواقع في المغطس ضرورة ملحة نظراً للظروف المناخية والطبيعية في المنطقة من حرارة ورطوبة وارتفاع نسبة الملوحة في التربة والمياه الجوفية، وتأثيرها على المواد الهشة المستخدمة في البناء في الموقع.

لذلك تم التركيز على:

صيانة الأرضيات الفسيفسائية في كل من دير روتوريوس والكنائس في موقع تعميد السيد المسيح عليه السلام.

صيانة وتقوية هياكل المظلات وإضافة طبقة خلطة إسمنتية فوق الطبقة القديمة لكل من مظلة الكنيسة الشمالية / في المنطقة الشمالية من تل النبي الياس عليه السلام، والبازيليكا / في منطقة الكنائس في موقع تعميد السيد المسيح عليه السلام.

بناء مدماك واحد من الطوب الطيني فوق الجدار الجنوبي للكنيسة الشمالية في دير روتوريوس وذلك بهدف حماية الأرضية الفسيفسائية للكنيسة من مياه الأمطار

أعمال التوثيق

تم نشر دراسة عن دير روتوريوس في حولية دائرة الآثار العامة العدد ٤٩، وتضمنت الدراسة شرح عن المظاهر المعمارية في الدير مع بعض الصور والمخططات.

اسم المشروع: الصيانة والترميم في خربة الدير/ الفحيص

مشرفا: : سعد الحديدي ، يزيد عليان

تاريخ المشروع: ١ / ٦ – ٣٠ / ١١ / ٢٠٠٦

كلفة المشروع: ٢٠ ألف دينار

عدد العمال: ٢٥ عاملا

مصدر التمويل: وزارة التخطيط

العمل والنتائج:

١- كشفت أعمال التنقيب عن ثلاث غرف متجاورة،بنيت من الحجارة الكلسية غير المنتظمة والمتوسطة الحجم وعثر في الطبقات الأثرية على كسر فخارية ترجع إلى العصر الأيوبي المملوكي.

كما لوحظ وجود أخدود في أحد الجدران مبني من الحجارة ربما استخدم كقناة للمياه، كما عثر على حجرين رقيقين في أحد الزوايا ربما استخدما كجزء من تنور أو فرن.

الغرف الجنوبية قبل الترميم

بوابة الأقبية الشرقية بعد الترميم

أعمال الترميم والتقوية

١- شملت كافة الجدران التي تم التنقيب فيها سابقاً حيث تم إعداد خلطة مناسبة من الشيد والرمل والإسمنت الأبيض لتثبيت الحجارة والجدران وحقنها في الفراغات بين الحجارة إلى مستويات غائرة قليلاً عن مستوى الحواف.

جدار الاقبية الشرقية بعد الترميم

اسم المشروع : مطل الجادور / السلط

مشرفو المشروع: : سعد الحديدي ، يزيد عليان ، رستم مكجيان

تاريخ المشروع : ١ /١- ١/٤/٢٠٠٦

مصدر التمويل: المشروع الياباني

ضمن المشروع السياحي الهادف الى تطوير وسط مدينة السلط والمتضمن رصف الشوارع القديمة وبناء الأدراج وإعادة تأهيل بعض المباني وإنشاء المطلات السياحية فقد تم اكتشاف أثري بالغ الأهمية في ساحة المدرسة الثانوية فوق قمة الجادور وسط مدينة السلط وهو الجدار الدفاعي الذي كان جزء من المدينة القديمة التي ازدهرت في العصرين البرونزي القديم والبرونزي الوسيط ٠

العمل والنتائج:

١- حماية الجدار الأثري من الشمس والمطر وذلك من خلال بناء مظلة خشبية ٠

٢- تثبيت الجدار من خلال حقن الفراغات بين الحجارة بمونة مناسبه ومشابهة للمواد التى بني منها الجدار ٠

٣- وضع الإنارة وإقامة الجدران الإستنادية وإنشاء الأدراج التي تسهل على السائح والزائر الوصول للموقع وتحافظ على سلامة الآثار ٠

كما تم بناء درابزين حماية حول الموقع وكذلك بناء مصطبة حجرية تطل على مدينة السلط ضمت المقاعد المناسبة للزوار والسياح ٠

واصبح المطل السياحي لمنطقة الجادور من المعالم الاثرية والسياحية المميزة بمدينة السلط ٠

اسم المشروع: تطوير جبل القلعة

مشرف الترميم : محمد علي الخطيب

تاريخ المشروع : ١٠/٤ – ٢٠٠٦/١٢/٢٠

كلفة المشروع : ٣٠ ألف دينار

عدد العمال : ٣٠ عاملاً

مصدر التمويل: موازنة دائرة الآثار العامة

تركز العمل هذا الموسم في الجهة الجنوبية للقلعة، وبالتحديد في البوابة C (المطل)، حيث ترتكز على طمم من حجارة وتراب بسماكة ستة امتار تقريباً، جدران أثرية في الأسفل كانت قد بنيت لدعم البوابة ، ولكن حصل منذ سنتين إنهيار لجزء من الطمم المكشوف كما ان قوة الضغط تسببت في دفع بعض مداميك الجدران المسانده لهذا الطمم. لذا تم عمل جدار استنادي للطمم في الجزء المكشوف، باستخدام كتل صخرية كبيرة الحجم بدون استخدام المونة بشكل مائل نحو الداخل وصولاً الى أول مدماك من البوابة.

وتم فك أربعة مداميك في أعلى الجدار الأثري المساند، حيث كانت بحالة انبعاج للخارج جراء الضغط، وتم ازالة الطمم المتراكم خلفها، وإعادة تركيبها وتعديل ميلانها، وتم وضع اربعة حجارة جديدة أسفل الجدار، حيث أن الحجارة الاصلية كانت متآكلة.

ونفذت أعمال صيانة وترميم في منطقة البوابة الجنوبية مقطع ١٤، لبعض الجدران باستخدام خلطه كلسية، و عمل فاصل من مكعبات حجرية سوداء صغيرة الحجم لتمييز التدخل الحديث.

وفي مقطع ١٩ الواقع في الجهة الجنوبية الشرقية للقلعة، تمت صيانة المنشآت الإسلامية بإستخدام الخلطة الكلسية.

مقطع ١٤ - المنطقة الجنوبية / سور القلعة من الداخل قبل اعمال الصيانية والترميم

مقطع ١٤ - المنطقة الجنوبية / سور القلعة من الداخل بعد اعمال الصيانية والترميم

مقطع ١٤ - إحدى الجدران قبل الترميم

اسم المشروع التنقيب في رجوم ابونصير/ المربط

مشرف المشروع: أديب ابوشميس

تاريخ المشروع : ٥/٧- ١٥/٩/٢٠٠٦

كلفة المشروع : ٧٠ ألف دينار

عدد العاملين : ٢٥ عاملا

مصدر التمويل : دائرة الآثار العامة

العمل والنتائج :

التنقيب:

أستمر العمل في مربع BA3 الذي وصل العمل به بموسم ٢٠٠٥م عند ظاهرة رقم ٤ التي تمثل ردم متساقط من حجارة مبنى رقم ٢، حيث تبين:

١. أتضح وجود عبث بهذا الردم حتى أرضية الإقامة التي تتكون من الصخر الطبيعي الذي تمت تسويته لإقامة مبنى رقم ٢ ولتكون أرضية المخزن الخارجي (مبنى التصنيع الزراعي)، وبهذا تبين أن هذه الصخور ليست عملية تبليط وإنما هي أصلية أي صخر طبيعي تم تسوية سطحه لإقامة مبنى رقم٢ ومن ثم استخدم كبلاط للمخزن خارج المبنى المحصن.

وفي مربع رقم BA2 كشفت دعامات المبنى الخارجي (المصنع) ويعتبر هذا الجزء من المبنى مكان خزين في المستقر حيث كشف كمية من حبوب القمح المتفحم وكسر جرار الفخار الكبيرة التي تستخدم لغاية التخزين. ومن دراسة الفخار الأولية تبين انه من فخار نهاية القرن السادس ق.م

- أما أعمال تصحيح وضع بعض الحجارة المتساقطة في ساحة مبنى رقم ٣ فقد تم العمل في الجدار الشمالي لهذه الساحة حيث تم في البداية رسم وتوثيق ما كان موجودا ورصدت الحجارة التي يمكن استخدامها لإقامة مدماك واحد فوق الأساس الظاهر على سطح الأرض.

المربع BA3

الجدار الشمالي مبنى رقم ٣

اسم المشروع: الصيانة والترميم في قلعة ضبعة

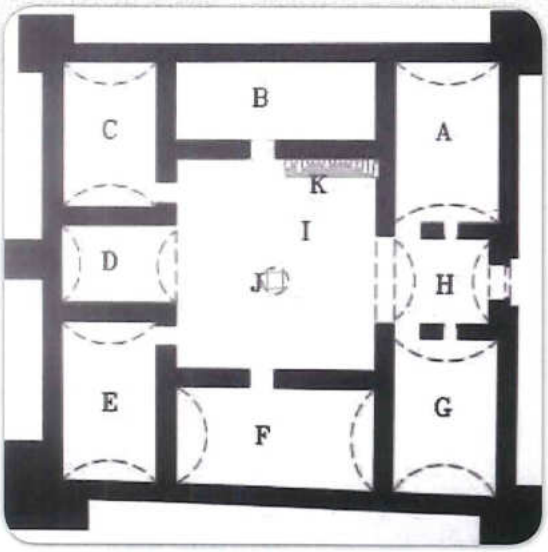
مشرفا المشروع: عدنان الرفايعه ، م. شان تسي

تاريخ المشروع: من ١٥/٧-٣١/١٢/٢٠٠٦

كلفة المشروع: ٢٥ ألف دينار

عدد العمال: ١٣ عاملا

مصدر التمويل: وزارة التخطيط



مخطط قلعة ضبعة

الصيانة والترميم

الغرفة D:

وهي مواجهة للمدخل الرئيسي الى الغرب من الساحة، لها أرضية من التراب، أبعادها (٦م X ٥,١٠م X ٣,٥٠م)، حيث تم أولا إزالة الكحلة القديمة في واجهتها الرئيسية، والعمل على تكحيلها من جديد، أما تبليط الغرفة فتم الإعتماد على نفس حجارة القلعة وعلى نفس خطوط بناء الساحة مع رفع عتبة الغرفة حوالي ١٥سم لمنع تجمع المياه بداخلها.

المقاعد الحجرية في المرفق H :-

وهي عبارة عن مقعدين الأول يقع على يسار المدخل الرئيسي من الداخل، والثاني يقع على يمين المدخل، وهما يرتفعان عن أرضية المدخل قرابة ٢٠ سم بطول حوالي ١,٨٥م وعرض ٨٠سم، ويغطي سطح المقعدين بقايا اسمنتية ، وفي الموسم القادم سيضاف مدماك واحد من الحجر وتبليط سطح هذه المقاعد ليستطيع الزائر للقلعة استخدامها بشكل مريح، معتمدين في ذلك على روايات الأهالي عن وضعية هذه المقاعد سابقا.

إعادة تكحيل الساحة والجدران :-

- الساحة المكشوفة: تم تكحيل واجهاتها الأربعة (٩,٢٠م × ٩,٧٠ م) بارتفاع ٨ مداميك.

الغرفة الشمالية الوسطى: تكحيل من ٨- ١٠ مداميك.

- الواجهة الغربية للغرفة المواجهة للمدخل الرئيسي : ٣,٥٠م X ٢,٣٠م، ثمانية عشر مدماكا

جدران بعد الصيانة

الغرفة الجنوبية الوسطى :-

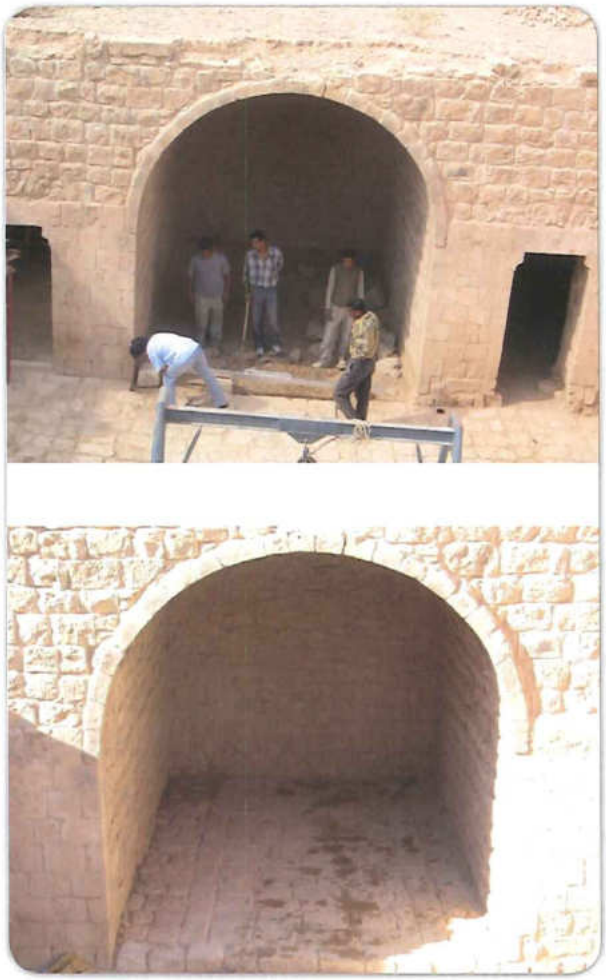
تكحيل ثلاث واجهات بواقع عشرة مداميك.

إكمال بناء الدرج الصاعد (K) إلى سطح القلعة :-

يقع الدرج في الجهة الشمالية الشرقية من الساحة، وهو ملاصق للغرفة الشمالية الوسطى من الجنوب وللغرفة الشمالية الشرقية من الغرب، ويرتكز على بناء قوسي، يتم الصعود خلاله من الساحة الرئيسية إلى الطابق الثاني أو إلى سطح القلعة، وتبلغ عدد درجاته ١٧ درجة في حين يبلغ ارتفاع الدرجة الواحدة ٢٢ سم، وعرضها ٢٥-٢٧ سم ويبلغ طول الدرجة ١١٠ سم، وقد تم إعادة بناء أجزاء كبيرة منه خاصة الأجزاء العلوية لما لحقها من تخريب ودمار، حيث تم تفصيل طبعة قوس من الخشب ليتم سند البناء القوسي الذي يرتكز عليه الدرج، وإعادة بناء الحجارة المفقودة من القوس بعد قصها للتناسب مع طبيعة البناء ورفدها بدعامات خشبية من الأسفل حتى تتحمل ثقل الحجارة الكبيرة فوقها، بعد ذلك تم إعادة بناء الحجارة المفقودة من الدرجات العلوية ليتم الصعود إلى أعلى بكل يسر وسهولة. وبعد الانتهاء من عمليات البناء تم تكحيل الفواصل بين حجارة الدرج.

الجدار الرئيسي للمرفق F والمطل على الساحة : -

يقع هذا الجدار في الجزء الجنوبي من الساحة ويشكل الجدار الداخلي للمرفق F والمطل على الساحة ويتجه شرق غرب بطول ٦م، و فية مدخل للمرفق F، ويبلغ عرض الجدار ٨٠سم وقد تعرض للدمار،وفقدت كثير من حجارته، لذا قمنا بوضع شحف حجرية وتم تدعيمها بالمونة المناسبة ومن تم تكحيل السطح، نمنع تسرب المياه.



صيانة بعض الأقبية

اسم المشروع: تنقيب وترميم وصيانة المسرات

مشرف المشروع: رومل غريب، احمد شرمه

تاريخ المشروع: من ١٧-٣٠/١١/٢٠٠٦

كلفة المشروع: ١٠٦٨٠ ديناراً

عدد العمال: (١٥) عاملاً

مصدر التمويل: وزارة التخطيط

العمل والنتائج

التنقيبات

أ. تركز العمل في هذا الموسم في المنطقة B من الموقع حيث تم التنقيب في عشرة مربعات هي:-
H7، H8، I7، I8 ، J8 ، G10 ،E7،E8،E9،E10.

ب. استكمال العمل في المربع I5.

ج. فتح البوابة الموجودة بين المربعين F8،G8 والتي تم الكشف عنها في المواسم السابقة.

وأهم ما تم الكشف عنه في هذا الموسم في المربعات:
(H7و H8 و I7 و I8 و J8)

١. الكشف عن الجدار 115 الذي يمتد باتجاه الشرق، ويتكون من ثلاثة مداميك من الحجارة المتوسطة والمنتظمة، طوله 15متر، عرضه 80 سم وارتفاعه 135سم. أعيد استعمال هذا الجدار في المرحلة الثانية من الاستيطان.

٢. آثار طابون في المربع J8، يتكون من مجموعة من الحجارة الصغيرة و المتوسطة.

٣. عدد من الأرضيات المرصوفة وغير المرصوفة مثل الأرضية الموجودة في المربع J8 والمربع I7.

العثور على

- عدد من القطع النقدية والتي تم تنظيفها وقراءتها.
- زبدية فخارية كاملة صغيرة وعميقة تعود للفترة البيزنطية.
- حجر كلسي يحتوي على نقش لصليب، يبدو أنه أعيد استعماله في فترة لاحقة وجد في المربع H8.

موقع التنقيب

قبل الترميم

...بعد الترميم

- المربعات(E7 و E8 و E9 و E10) إلى الشرق من الكنيسة.

تقع المربعات إلى الشرق من الكنيسة و تنخفض عن الجزء الغربي من الحفرية و قد أسفرت نتائج التنقيبات عن:

١. الكشف عن الجدار رقم١٢٤ الموازي للجدار رقم ١٠٩، يمتد باتجاه الشمال بطول ٢٠ متر و بعرض ٧٠ سم، يتكون من عدة مداميك من الحجارة الصغيرة والمتوسطة غير المنتظمة وهو متهدم، تتعامد معه ثلاثة جدران تمتد الى الشرق تجاورها ركب أقواس، شكلت مع هذا الجدار مجموعة من الغرف.

٢. صف من الحجارة المشذبة على أرضية المربع E7 تمتد الى الشمال، وضعت على ما يبدو لرفع الجزء الغربي من هذا المربع عن جزئه الشرقي.

٣. في المربع E9 عثر على طبقة تحتوي على كمية كبيرة من عجينة الطابون أسفلها عثر على أرضية ترتبط بالجدار 124.

قبل الترميم

...بعد الترميم

العثور على

- سراج فخاري شبه كامل يعود إلى الفترة البيزنطية.
- سراج فخاري شبه كامل يعود إلى فترة مبكرة من الفترة البيزنطية.
- عدد من القطع النقدية تم تنظيفها وقراءتها.

المربع G10:- داخل الكنيسة كشفت التنقيبات الأثرية فيه عن طبقات سكنية تعود إلى فترة حديثة فقد عثر على زبدية نحاسية و أداة برونزية تشبه الجعبة التي كان يوضع فيها البارود للبنادق القديمة. و أسفل هذه الأرضيات تم العثور على أرضية من الفسيفساء الملونه، إلا أن العمل في هذا المربع لم يكتمل.

أعمال الصيانة والتقوية:

استكمال أعمال التقوية والصيانة للجدران والمظاهر المعمارية التي تم كشف عنها في المواسم السابقة.

اسم المشروع: صيانة وترميم قصر شبيب

مشرف المشروع: رومل غريب

تاريخ المشروع: ١/٧-٣٠/١١/٢٠٠٦

كلفة المشروع: ٦١٣٣ ديناراً

عدد العمال: ١٠ عمال

مصدر التمويل: وزارة التخطيط

العمل والنتائج:

الصيانة والترميم للقصر من الداخل والخارج.

١- استكمال أعمال إزالة القصارة الحديثة التي تغطي واجهات القصر الداخلية والكحلة التالفة استمراراً لأعمال الصيانة وتقوية جدران القصر بكحلة تحاكي طابعه الأثري القديم.

٢- تنظيف وصيانة سقف مدخل البوابة المؤدية لسطح الطابق الأول للقصر.

٣- تنظيف واجهات وسقف بيت الدرج وملء الفراغات الناتجة عن سقوط بعض الحجارة بحجارة مشابه بالشكل والحجم ومناسبة لطابع البناء الذي كانت عليه.

٤- تنظيف الجدار الداخلي لمكب الماء الساخن والزيت الحارق من بقايا القصارة الحديثة وتكحيلة.

٥- تنفيذ قوس النافذة الموجودة في الواجهة الشرقية وتكحيلها.

٦- تنظيف الدرج وأرضيته، وملء الأماكن الفارغة بحجارة مناسبة للطابع الأصلي.

٧- صيانة نافذة الواجهة الجنوبية للقصر وإزالة الحجارة التالفة واستبدالها بأخرى مناسبة لطابع البناء.

الدرج قبل الترميم

الدرج بعد الترميم

القوس بعد الترميم

أسم المشروع : التنقيبات والصيانة والترميم لقلعة الأزرق

مشرفا المشروع : عارف الدهيثم، أحمد لاش

تاريخ المشروع : ٩ /٧ – ٣١ / ١٢ / ٢٠٠٦ م

كلفة المشروع : ٢٠ ألف دينار

عدد العمال : ٢٨ عاملاً

مصدر التمويل : وزارة التخطيط

العمل والنتائج

جاء هذا الموسم استكمالا للإعمال في المواسم السابقة.

التنقيب الأثري :

تم اختيار المسجد الموجود في وسط ساحة القلعة لأجراء مجس اختبار داخله و تحديداً عند أساسات الأعمدة التي ترفع العقود التي يرتكز عليها سقف المسجد، و اللافت في هذه الأعمدة أنهما على طرازين مختلفين و لا توجد أية أعمده داخل القلعة إلا في المسجد، حيث كان الاعتقاد بأن المسجد ربما بُني على أساسات مبنى أقدم، و تم العمل حتى تم الوصول إلى الصخر الطبيعي و لم يتم العثور على أية مؤشرات على مبنى أسفل المسجد.

تم العمل في الغرفة رقم (٣٦) في الجزء الجنوبي الشرقي من القلعة، حيث تم رفع كمية كبيرة من الطمم المتراكم في داخلها، و كانت النتيجة أنه تم الكشف عن جدارين بنيا فوق بعضهما البعض، و في الجدار الأسفل تم الكشف عن مدخل يؤدي للغرفة السفلية، و لكن لم يتم التأكد من طبيعة هذين الجدارين و فترتهما التاريخية.

أثناء الترميم

الترميم :

يعتبر الترميم هو الهدف الأساسي لهذا الموسم، و كانت الخطة ترميم الجدار رقم (٢٠)، و هو الجدار الشمالي الغربي للقلعة من الداخل و يبلغ طوله الكلي ٢٢،٧٥ م و ارتفاعه ما بين ٤،٤٥ – ٥،٢٠ م، و سماكته مابين ٨٠ – ١٠٠ سم.

و قد كان هذا الجدار بوضع سيء جداً و تظهر فيه أنبعاجات و تلف بعض حجارة المداميك السفلية مما سبب ضعفها، لذلك تم تقسيمه إلى ثلاث مراحل

١- فك الأجزاء التالفة و أعادة بنائها بعد معالجة الانبعاجات و استبدال الحجارة الضعيفة.

٢- فك الشبائح الحجـرية التي تشكل سقف الغرفة رقم ١٣ و الملاصقة للجدار رقم (٢٠) و ذلك بسبب خطورتها و عدم ثباتها، وأعادة الشبائح لوضعها الطبيعي.

بعد الترميم

اسم المشروع: تنقيب وترميم وصيانة موقع الحلابات الأثري

مشرف المشروع: رومل غريب

تاريخ المشروع: من ١٥/١١-٣١/١٢/٢٠٠٦

كلفة المشروع: ٥٢٢٨ ديناراً

عدد العمال: ٢٥ عاملاً

مصدر التمويل: وزارة التخطيط

العمل والنتائج:

جاءت أعمال هذا الموسم استكمالاً للمواسم السابقة، رمم اغلبها ولا يزال العمل مستمراً على كشف ما تبقى من هذه المنازل مع ترميم وتقوية وصيانة مظاهرها المعمارية، ويهدف العمل في مشروع التنقيبات الأثرية في المنازل الأموية إلى إستكمال الكشف عن المنازل الأموية المتناثرة حول قصر الحلابات وتوضيح معالمها ومن ثم ترميمها وصيانتها وتقوية جميع المظاهر المعمارية المتعلقة بها وذلك لتهيئة هذا الموقع ليكون قادراً على استقبال الزوار و السياح والمساهمة في عملية تنشيط السياحة الداخلية والخارجية.

أولاً: أعمال التنقيبات الأثرية:

١. استكمال أعمال التنقيب في المجمع السكني رقم ١، حيث نقب في خمس غرف هي ١٩،١٨،١٧،١٦،١٥.

٢. فتح مجموعة من البوابات المغلقة داخل هذا المجمع السكني والتي تم الكشف عنها في مواسم سابقة أو في هذا الموسم، تسهيلاً للحركة والتنقل داخل المنزل.

وأهم ما تم الكشف عنه في هذا الموسم هو مايلي:

١. في الغرفة ١٩ (غرفة المعيشة) كشف عن تجمع لمظاهر معمارية تمثل أحواض نصف دائرية الشكل، احتوت على بقايا رماد وبعض الكسر الرخامية و بنيت من حجارة متوسطة وغير منتظمة الشكل، وكذلك بقايا طابون موجود في الزاوية الشرقية بالإضافة إلى بقايا عجينة فخارية كانت تستخدم في جدار الطابون.

الغرفة ١٧

قبل الترميم

بعد الترميم

٢. أثناء التنقيب في الغرفة ١٧ تم الكشف عن أرضية مرصوفة بحجارة صغيرة امتدت في الجزء الغربي من الغرفة، و بوابتين احداهما موجودة في جدار الغرفة الشرقي المشترك بينها وبين الغرفة ١٨. والأخرى في الجدار الغربي المشترك بينها وبين الغرفة ١٦.

٣. الكشف داخل الغرفة ١٦ عن جدارين أحدهما يتكون من صفين من الحجارة المتوسطة وغير المشذبة والآخر يتكون من صف واحد،بارتفاع مدماكين ويتقاطعان مع بعضهما البعض، بحيث يقسمان الغرفة إلى أربعة أقسام يمثل كل قسم منها حوض.

وجاءت أعمال التنقيبات الأثرية في هذا الموسم لتؤكد ما تم الكشف عنه في المواسم السابقة،من حيث أن هذه المنازل كانت تستخدم للسكن من قبل عامة الشعب الذين كانوا يعملون على خدمة قاطني قصر الحلابات، وذلك يعود للتنظيم البسيط وغير المعقد لهذه المنازل وبأنها قد بنيت في الفترة الأموية ولم تستخدم لا قبل ولا بعد هذه الفترة. تم العثور على ثلاث قطع نقدية مصنوعة من النحاس يبدو من خلال القراءة الأولية أنها تعود للفترة الأموية،و كتب عليها باللغة العربية عبارات مثل: «الله»،«محمد»، سورة الصمد.

الغرفة ١٦ قبل العمل

... بعد العمل

ثانياً: أعمال الصيانة والتقوية:

استكمال أعمال التقوية والصيانة للجدران والمظاهر المعمارية التي كشف عنها في المواسم السابقة والموسم الحالي، وذلك بطريقة تحاكي الطابع الأصلي للمبنى.

ثالثاً: أعمال الرسم والتوثيق:

إعادة رسم جميع المظاهر المعمارية التي تم الكشف عنها في هذا الموسم وفي المواسم السابقة وذلك بعمل مسقط عمودي (Top Plan) بالطريقة اليدوية.

اسم المشروع: اقتلاع أرضية الجنة / متحف آثار مادبا

مشرف المشروع: كاترينا الحمارنة

تاريخ المشروع: ٨ -١٨/ ٩/ ٢٠٠٦

مصدر التمويل: معهد الآباء الفرنسيسكان

مقدمة:

ضمن الجناح الشمالي الشرقي لمتحف آثار مادبا، وجدت أرضية فسيفسائية أبعادها (٣،٥٨م × ٥،٣٧ م) تمثل أربع شجرات تنطلق من الزوايا، و تلتقي بالوسط في دائرة صور بها وجه "فتى"، في حين صور بين جذوع الأشجار رسوم لحيوانات متآلفة، مما حدا بالدارسين الافتراض بأنّ هذا المشهد يرمز إلى الجنة.

الأعمال و النتائج:

- توثيق الأرضية بالرسم على البلاستيك و بالتصوير
- تنظيف سطح الفسيفساء ميكانيكياً
- تدعيم الإنتفاخات بحقنها بملاط مؤقت
- إعداد مخطط اقتلاع و تطبيقه
- إزالة الملاط القديم من خلفيات اللوحات

اسم المشروع: صيانة و ترميم اللوحة الفسيفسائية / متحف آثار الجامعة الأردنية

مشرف المشروع: كاترينا الحمارنة

تاريخ المشروع: ٢٨/٥-١٢/٦/٢٠٠٦

كلفة المشروع: ٥٠٠ دينار

مصدر التمويل: موازنة دائرة الآثار العامة

تدعى هذه اللوحة بلوحة الفصول الأربعة، تبلغ أبعادها (٢٨٠ سم × ١٠٠ سم)، و تمثل لفائف من نبات الأكانثوس، مثّل بداخلها شكل آدمي،و وزه و نبتة.

أهداف المشروع:

ترميم و صيانة اللوحة الفسيفسائية، و تأهيلها للعرض.

الأعمال و النتائج:

- توثيق حالة اللوحة
- تنظيف سطح الفسيفساء ميكانيكياً و كيميائياً
- تدعيم الإنتفاخات بحقنها بملاط مؤقت
- معالجة الفجوات بالحجارة المتساقطة
- تغطية سطح الفسيفساء بمادة البرالويد بهدف حمايتها من الرطوبة

التنظيف الكيميائي

تثبيت الحجارة الساقطة

تغطية اللوحة بطبقة حامية

اسم المشروع: اقتلاع أرضية كنيسة لوط و بروقوبيوس / المخيّط

مشرفا المشروع: معهد الآباء الفرنسيسكان – مدرسة مادبا للفسيفساء

تاريخ المشروع: ٢٥/٦- ٢٨/٧/٢٠٠٦

مصدر التمويل: معهد الآباء الفرنسيسكان

مقدمة:

تقع بقايا خربة المخيّط قرابة (٧ كلم) إلى الشرق من مدينة مادبا، حيث تعدّ كنيسة القديسين الشهيدين لوط و بروقوبيوس أول الكنائس المكتشفة في المنطقة. بنيت هذه الكنيسة على النظام البازيليكي، و رصفت أرضيتها بالفسيفساء التي تمثل مشاهد للحياة اليومية من رعي و صيد، إضافة لمشاهد لحيوانات و طيور مختلفة.

الأعمال و النتائج:

- إعداد مخطط لتقييم حالة الأرضية
- توثيق الأرضية بالرسم على البلاستيك و بالتصوير
- تنظيف سطح الفسيفساء ميكانيكيا و كيميائياً
- اقتلاع اللوحات الفسيفسائية من الصحن الجنوبي

تنظيف الارضية

اقتلاع الصحن الجنوبي

اسم المشروع: صيانة و ترميم أرضية كنيسة الكاهن يوحنا الصغرى / المخيّط

مشرف المشروع: معهد الآباء الفرنسيسكان – مدرسة مادبا للفسيفساء

تاريخ المشروع: ٢٠٠٥/١٢/٣ - ٢٠٠٦/٣/١٢

عدد الفنيين: فنيان (محمد فريج، يوسف أبو فردة)

مصدر التمويل: معهد الآباء الفرنسيسكان

مقدمة:

عام ١٩٣٥ على المنحدرات الشرقية لقمة المخيّط ' اكتشفت كنيسة تعود للقرن السادس سميّت بالكنيسة الصغرى للكاهن يوحنا، امتازت الأرضية بزخارف هندسية، و مشاهد للحياة اليومية، إضافة لتشخيص، بعض المحسنين، و كتابات الإهداء.

أهداف المشروع:

١-صيانة و ترميم الأرضية، و استكمال الأجزاء التي فقدت، بصبها على سند جديد من الإيرولام، لتسهيل جمعها كقطعة واحدة ليتم عرضها.

٢- تدريب العاملين في مدرسة مادبا للفسيفساء على أعمال الصيانة و الترميم.

الأعمال و النتائج:

- جمع القطع الفسيفسائية المقتلعة سابقاً
- ترميم الأجزاء المكسورة و المفقودة
- ترميم كافة القطع بصبها على سند جديد من الإيرولام
- إجراء التنظيف السطحي النهائي للوحات
- عمل حماية للسطح بتغطيته بمادة البرالويد

اسم المشروع: صيانة و ترميم فسيفساء قبو زيوس / جرش – المرحلة الثالثة

مشرف المشروع: كاترينا الحمارنة

تاريخ المشروع: ٨/٢- ١٨/٢/٢٠٠٦

كلفة المشروع: ٣٠٠ دينار

عدد الفنيين: أربعة فنيين

مصدر التمويل: موازنة دائرة الآثار العامة

مقدمة:

عام ١٩٨٤م ، و أثناء قيام المعهد الفرنسي للشرق الوسط بأعمال التنقيب الأثري ضمن الممر الشمالي الشرقي الواقع فوق أقبية معبد زيوس، اكتشفت ثلاث أرضيات فسيفسائية تمثل أشكالاً هندسية.

فسيفساء قبو زيوس

أهداف المشروع:

١- إنقاذ الفسيفساء من التلف والرطوبة العالية

٣- معالجة الفجوات لمنع تسرب المياه إلى داخل القبو

الأعمال و النتائج:

- توثيق الأرضية بالرسم على البلاستيك (١:١) و بالتصوير.
- تنظيف سطح الفسيفساء ميكانيكياً.
- تدعيم الإنتفاخات بحقنها بملاط مؤقت.
- إجراء التنظيف الكيميائي لسطح الفسيفساء، وعمل مجرى لتسريب المياه السطحية.
- إغلاق الفجوات الناشئة وسط الأرضية بسبب فقدان الفسيفساء، بفرشها بطبقات من الرمل و الحصى و الملاط، ثمّ تغطيتها بطبقة من ألواح الفايبرجلاس لمنع تسرب المياه.

معالجة الأرضيات التالفة

اسم المشروع: صيانة و ترميم فسيفساء كنيسة الكاتدرائية / مادبا

مشرف المشروع: كاترينا الحمارنة

تاريخ المشروع: ٢٠٠٦/٩/١٣ - ٥/٣١

كلفة المشروع: ١١٥٠ دينارا

عدد الفنيين: ثلاثة فنيين

مصدر التمويل: موازنة دائرة الآثار العامة

مقدمة:

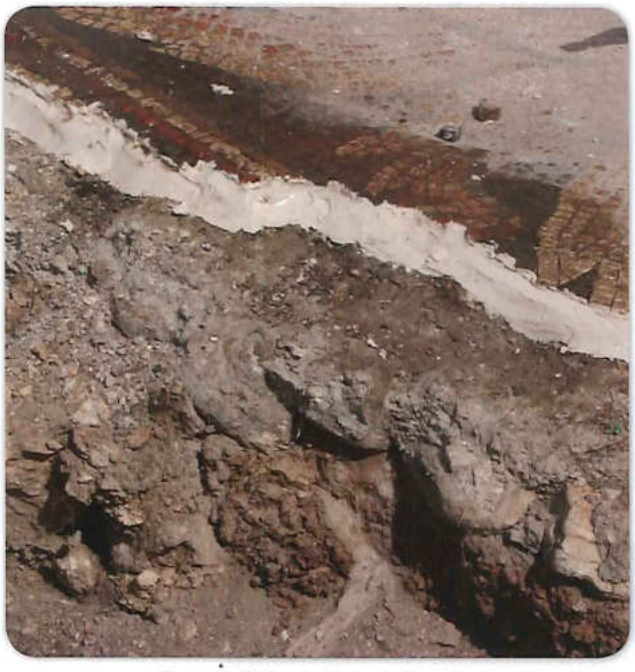
على السفح الجنوبي من تلّ مادبا، في المنطقة المعروفة باسم حيّ المصاروة، وجدت أطلال لمبنى ضخم أطلق عليه لضخامته اسم «مبنى الكاتدرائية». خلال الأعوام الممتدة من ١٩٧٩م و لغاية ١٩٨٢م قامت دائرة الآثار العامة بإجراء عدة حفريات أثرية، حيث كشفت عن أطلال لكنيسة القديس ثيودورس الصغرى، التي فرشت بالفسيفساء الملونة ذات الأشكال الهندسية و الحيوانية إضافة لتشخيص أنهر الجنّة، إضافة إلى ساحة فرشت بالفسيفساء البيضاء، و الكتابات.

أهداف المشروع:

- تقييم حالة الأرضيات الفسيفسائية صيانتها و ترميمها
- إجراء أعمال التنقيب الأثري في المنطقة الجنوبية.

الأعمال و النتائج:

- توثيق الأرضية بالرسم و التصوير.
- تنظيف سطح الفسيفساء ميكانيكياً.
- تدعيم الإنتفاخات بحقنها بالجير الهيدروليكي.
- عمل ملاط حواف للأرضية.
- معالجة الفجوات.



عمل ملاط حواف لحماية الأرضية

اسم المشروع: صيانة و ترميم فسيفساء المتنزه الأثري

مشرف المشروع: كاترينا الحمارنة

تاريخ المشروع: ٤/٤- ٢٥/٦/٢٠٠٦

كلفة المشروع: ٥٢٢ ديناراً

مصدر التمويل: موازنة دائرة الآثار العامة

مقدمة:

عام ١٩٩٥ قامت وزارة السياحة و الآثار / دائرة الآثار العامة بإنشاء المتنزه الأثري، ليضم بين جنباته أهم الأرضيات الفسيفسائية من مدينة مادبا، تلك التي اكتشفت في موقعها، أو التي اقتلعت للعرض.

أهداف المشروع:

- إجراء الصيانة الدورية لفسيفساء الموقع.
- صيانة الغطاء الحامي (الشلتر) لموقع كنيسة العذراء.

الأعمال و النتائج:

- معالجة نمو الطحالب عن سطح الفسيفساء
- عمل ملاط حواف حيثما يلزم
- تنظيف سطح الفسيفساء ميكانيكياً
- تدعيم مواقع الانفصال بحقنها بملاط هيدروليكي
- تركيب شبابيك حماية و زجاج لتأمين التهوية و لمنع دخول الطيور للموقع.

اسم المشروع : تنقيبات تل ذيبان

مشرفا المشروع: باسم المحاميد وخالد الهواورة

تاريخ المشروع: ٤/٧/-٣٠/١١/٢٠٠٦

كلفة المشروع: ٣٠ ألف دينار

عدد العمال: ٤٥ عاملا

مصدر التمويل: وزارة التخطيط

العمل والنتائج :

نقب هذا الموسم في المنطقة D في الجزء الشمالي الشرقي من التل الأثري حيث يوجد مبنى يعود إلي الفترة الأيوبية المملوكية سمي (بيت الحاكم المملوكي) لضخامة الجدران المكتشفة وكبر حجم الغرف، وكشف عن أربع غرف ، وأهمها الغرفة في الجهة الغربية من المبنى، والتي أعيد استخدامها ثلاث مرات خلال الفترة الأيوبية المملوكية..

- متابعة الكشف عن جدار تل ذيبان في الجهة الشرقية منة بطول ٢٠م
- تنظيف الحمام الروماني الذي كشف عنه في موسم ٢٠٠٢م من الحجارة والأتربة المتراكمة وإزالة الحجارة المتساقطة وترتيبها من اجل إعادة بنائها في مواسم لاحقة.

أحد الأبنية في المنطقة D

جدار تل ذيبان

اسم المشروع: ترميم الواجهة الغربية لكنيسة قلعة الكرك

مشرفا المشروع : خالد الطراونة ، ساطع المساعدة

تاريخ المشروع : ٨ / ١٠-٢٠/ ١٢/ ٢٠٠٦

كلفة المشروع : ٩ آلاف دينار

عدد العمال: ٣٠ عاملا

مصدر التمويل موازنة دائرة الاثار العامة

العمل والنتائج :

١-إزالة الطمم والتراب المتراكم الملاصق للجدار الغربي .

الكشف عن أساسات الجدار الاصلية وتبين ان ما تم ترميمه سابقا ليس له علاقة بأساسات الجدار وانه يبعد عنه للداخل مسافة ١م كما انه مبني على التراب مما يجلعه معرضا للسقوط في اي وقت .

٢- ترميم الواجهة الغربية وللحد المسموح به حاليا وإعادة تكحيله وبلغ طول الجدار الذي تم ترميمه ٥.٥ م وبارتفاع ٢م وعدد المداميك ٨ .

الواجهة الجنوبية قبل ازالة الطمم

الواجهة الجنوبية بعد ازالة الطمم

الواجهة الغربية بعد الترميم

الواجهة الغربية قبل الترميم

اسم المشروع : ترميم وصيانة قلعة الكرك

مشرفا المشروع : م. صدقي الحامد ، م. نوفل العجارمة

تاريخ المشروع : ١/١ – ٢٠٠٦/١٢/٣١

كلفة المشروع : ٤٠ ألف دينار

عدد العمال : ١٤ عاملاً

مصدر التمويل : موازنة دائرة الاثار العامة

العمل والنتائج :

يعتبر مشروع ترميم وصيانة قلعة الكرك احد ثمار التعاون بين دائرة الآثار العامة وسلطة المصادر الطبيعية حيث تم العمل على تثبيت الواجهات الشرقية والجنوبية ومنحدراتها التي كانت تشكل خطورة على استقرار معلم القلعة الرئيسية

تركز العمل خلال عام ٢٠٠٦ م على البرج الشمالي الشرقي الذي كانت بقاياه ه مهددة بالانهيار وتشكل بحكم موقع البرج خطورة على السلامة العامة ، وقد تم العمل على انجاز صيانة وترميم هذه المعالم وذلك على النحو التالي:

– السور الشمالي :

ا– الواجهة الداخلية / قوس مرمى السهم الأول

- إزالة مخلفات مواد منهارة (٢م٣)
- تلبيس حجر للاماكن المنهارة بمساحة (٣م٢)
- تكحيل حلول حجارة البناء بمساحة (١٦م٢)

٢- قوس مرمى السهم الثاني

- إزالة مخلفات مواد منهارة (٣م٣)
- تلبيس حجر للاماكن المنهارة بمساحة (٣,٩م٢)
- تكحيل حلول حجارة البناء بمساحة (١٥م٢)

٣ - قوس مرمى السهم الثالث

- إزالة مخلفات مواد منهارة وأتربة (٣,٥م٢)
- تلبيس حجر للأماكن المنهارة بمساحة (٥,٢م٢)
- تكحيل حلول حجارة البناء بمساحة (٢١م٢)

٤ - قوس مرمى السهم الرابع

- إزالة مخلفات مواد منهارة وأتربة (٢م٣)
- تلبيس حجر للأماكن المنهارة بمساحة (٥م٢)
- تكحيل حلول حجارة البناء بمساحة (١٠م٢)

٥ - قوس مرمى السهم الخامس

- إزالة مخلفات مواد منهارة وأتربة (٣م٣)
- تلبيس حجر للأماكن المنهارة بمساحة (١٧م٢)
- تكحيل حلول حجارة البناء بمساحة (٢١م٢)
- صب خرسانة ودبش في جسم السور بحجم (٣ م٣)

الواجهة الشمالية للبرج الشمالي الشرقي قبل الترميم

الواجهة الشمالية للبرج الشمالي الشرقي اثناء الترميم

٦ - قوس مرمى السهم السادس
- إزالة مخلفات مواد منهارة وأتربة (١م٣)
- تلبيس حجر للأماكن المنهارة بمساحة (١,٥م٢)
- تكحيل حلول حجارة البناء بمساحة (١٧,٥م٢)

٧ - قوس مرمى السهم السابع
- إزالة مخلفات مواد منهارة وأتربة (٤م٣)
- صب خرسانة ودبش في الواجهة الأمامية بحجم (١ م٣)
- تلبيس حجر للأماكن المنهارة بمساحة (١,٥م٢)
- تكحيل حلول حجارة البناء بمساحة (٢٢م٢)

ب- الواجهة الخارجية

١- ترميم الجزء الخراساني في الواجهة الخارجية للسور من خلال :
- تلبيس حجر بناء بنفس مواصفات حجر البناء المستخدم في الواجهة الخارجية بمساحة (٣,٥ م٢)
- تكحيل حلول حجارة البناء بمساحة (٣,٥ م٢)

٢- البرج الشمالي الشرقي

أ- الواجهة الشمالية

إعادة بناء جزء من الواجهة الشمالية على شكل درج مع تسليحه بمعدل ارتفاع يتراوح ما بين (١,٣- ١٠م) وعرض (٣,٧م) من منسوب الواجهة الحالي.

إن حجم أعمال الترميم والصيانة التي تم انجازها مبينة على النحو التالي
- تلبيس حجر بناء لما مساحته (١٠٢ م٢)
- تكحيل حلول حجارة البناء بمساحة (١٥ م٢)
- إعادة بناء جزء من الواجهة باستخدام ما حجمة (١٦٢ م٣) خرسانة ودبش

ب- الواجهة الشرقية

إعادة بناء الواجهة الشرقية بطول (١٢,٥ م) وارتفاع (١,٥ م) وعرض (٢,٤م)
- تلبيس حجر بناء لما مساحته (٣٧,٥ م٢)
- تكحيل حلول حجارة البناء بمساحة (١٨ م٢)
- إعادة بناء جزء من الواجهة باستخدام ما حجمة (٣٤ م٣) خرسانة ودبش

ج- الواجهة الغربية

– تثبيت حجارة البناء للواجهة الغربية الداخلية المكونة لقبوين من خلال القيام بعملية تكحيل حلول حجر البناء ما مساحته (٩٠م٢) من الواجهة

– تثبيت حجارة البناء للواجهة الغربية من الخارج من خلال إزالة المواد الرابطة المفككة وتكحيل حلول حجر البناء حيث بلغت مساحة الواجهة (١٣٠ م٢)


مرامي الأسهم ١- ٦ قبل الترميم


مرمى السهم رقم ٢ بعد الترميم


مرمى السهم رقم ٥ بعد الترميم

اسم المشروع : تنقيبات الرشادية

مشرف المشروع : جهاد درويش

تاريخ المشروع : ١/٧ - ٢٠٠٦/١٠/٣١

كلفة المشروع : ١٥ الف دينار

عدد العمال : ٧٠ عاملا

مصدر التمويل : وزارة التخطيط

العمل والنتائج :

استكمل التنقيب لهذا الموسم في كنيسة الرشادية وقد نقب في المرافق التابعة لها حيث كشف عن :

١- حوض حجري استخدم لهرس العنب.

٢- حوض فخاري مغروس في الأرضية ربما كان يستخدم في عملية تنقية عصير العنب قبل التخمير وحوض حجري بعمق ٤٠ سم يوجد بأعلاه أداة حجرية اسطوانية الشكل ربما كانت تستخدم لهرس العنب.

٣- محراب يشكل ثلاثة أرباع الدائرة وأرضية مبلطة.

عثر على :

١- سراج برونزي على شكل حيوان (الفترة البيزنطية) .

٢- نيشان برونزي عليه بعض الحروف اللاتينية ويعود للفترة البيزنطية.

٣- كسرة جرانيت عليها بعض الأحرف اللاتينية.

٤- تاجية عمود رخامي مزخرفة بأشكال نباتية بطول ٢٣سم وبعرض١٥سم.

٥ - كسر فخارية مختلفة الأشكال والأحجام بالإضافة إلى بعض القطع الزجاجية والرخامية المزخرفة.

٦- مطرة فخارية محززة وجزء من سراج فخاري

بعض الأبنية التابعة للكنيسة

اسم المشروع : تطوير متحف آثار الطفيلة

مشرفاً المشروع : جهاد درويش

تاريخ المشروع : ١/١٠/٢٠٠٦ - ٣١/١٢/٢٠٠٦

كلفة المشروع : ١٥ ألف دينار

عدد العمال : ٦٠ عاملاً

مصدر التمويل : وزارة التخطيط

العمل والنتائج

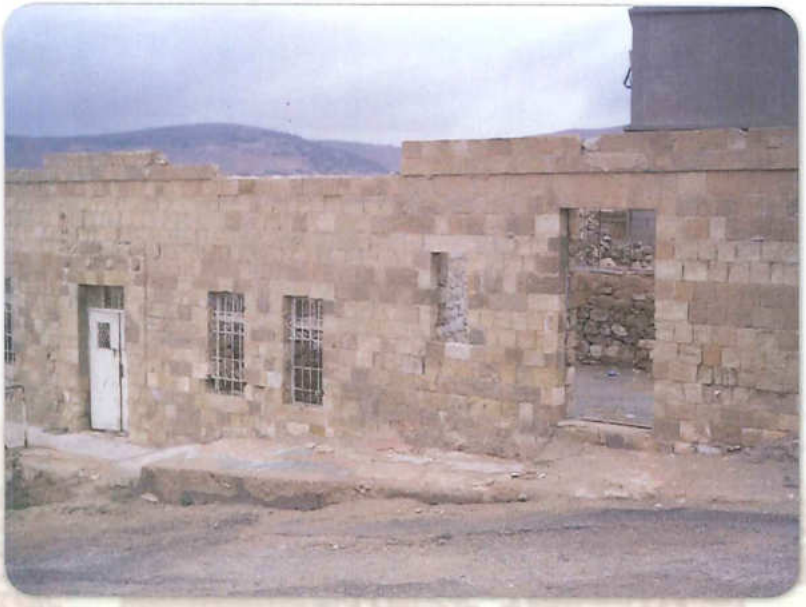
أولا : تنفيذ حفرية إختباريه للموقع للتأكد من عدم وجود أية معالم أثرية مرافقة له . حيث عثر على كسر من الفخار تعود للفترة الإسلامية المتأخرة ، ولم يتبين من خلال التسلسل الطبقي أية معثورات تدل على وجود استقرار مرافق للموقع قبل الفترة الإسلامية المتأخرة .

ثانيا : إزالة الأتربة والأنقاض من داخل المبنى التي كانت تشكل عائقا أمام أعمال الترميم والصيانة ، حيث أزيلت بعض أرضيات الغرف التي تتواجد في الجهة الجنوبية والشرقية للمبنى من اجل تسويتها وتهيئتها لأعمال الترميم اللازمة في المواسم القادمة ، حيث تبين أن هذه الأرضيات قد بنيت فوق الصخر .

ثالثا : تم إزالة بعض الواجهات الترابية التي كانت تفصل مابين بعض الغرف في الجهة الجنوبية من المبنى بارتفاعات مختلفة تصل إلى أربعة أمتار وبعرض ثلاثة أمتار ، من اجل توسعة هذه الغرف وتهيئتها لإستخدامات مختلفة عند الإنتهاء من أعمال الترميم والصيانة .

رابعا : إزالة طبقة القصارة عن الواجهة الأمامية ومعظم الواجهات الداخلية للمبنى والتي بنيت من الحجارة الكلسية المشذبة بطول ٢٤ م وبارتفاع يصل إلى ٤ م وذلك لتهيئتها لاعمال الترميم اللازمة .

خامسا : إزالة ما تبقى من الأسقف الإسمنتية والخشبية التي كانت تعلو سطح المبنى بما مساحته ٣٠ $م^2$ مربع وعمل تسوية للجدران استعدادا لأعمال البناء في الموسم القادم .



اسم المشروع: صيانة وترميم قلعة الشوبك

مشرفا المشروع: م.نوفل العجارمة،م. نبيل عديلات

تاريخ المشروع: ١/ ١/ ٢٠٠٥-٣٠/ ١٢/ ٢٠٠٦

كلفة المشروع: ١٣٠الف دينار

عدد العمال: ٢٥ عاملا

مصدر التمويل: موازنة دائرة الاثار العامة

العمل والنتائج :

شملت اعمال الترميم والصيانة خلال عام ٢٠٠٦ المواقع التالية :

- الجدار الجنوبي الغربي (R12)

يشكل هذا الجدار الحماية الخارجية للقلعة من الناحية الجنوبية يوجد به بوابة رئيسية تمثل مدخل للقلعة من الجهة الجنوبية (V1)يبلغ طول هذا الجدار ما يقارب ٧٠م وبارتفاع ٦م تاثر بالعوامل الجوية السائدة في المنطقة مما ادى الى تعرية وتساقط اجزاء من الحجارة وانهيار بعض الأجزاء الاخرى .

ومن اجل إعادة بناء هذا الجدار والحفاظ على الطابع الأثري :

- فك البطانة الداخلية الواقعة مابين الجدار الخارجي والداخلي والتي كانت تتكون من الدبش والاتربة ونقلها إلى خارج موقع العمل.

- تجريف وإزالة الأتربة والأنقاض المتواجدة على ظهر الجدار الخارجي المنهارة من السور الداخلي لحين اظهار قاعدة الجدار الاصلي ونقل الانقاض الى خارج منطقة العمل.

- إعادة بناء الأجزاء المنهارة من الجدار في الواجهة الجنوبية الغربية ما مساحتة ٢م٤٠ مع تنظيف حلول حجر البناء وإعادة تكحيل ما مساحتة ١٥٠م٢.

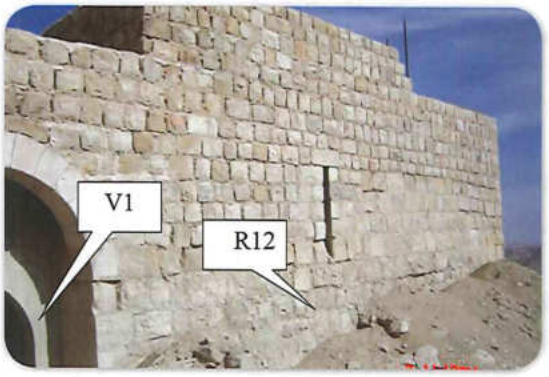
- المسجد

يقع في الجزء الجنوبي الشرقي من منطقة العمل أبعاده (٣,٦ × ٣) وبارتفاع ٣م وكان معظم اجزاء المسجد مملوء بالطمم كما أن حجر الجدران متآكل بشكل كبير ومعرض للإنهيار، أما مدخل المسجد فلا يوجد منه سوى المداميك الأرضية، ويوجد محراب في وسط الجدار الشرقي كما هو موضح من الداخل قبل اعمال الصيانة والترميم.

تم ترميم المسجد حسب الخطوات التالية :-

- تجريف وإزالة الطمم والأنقاض من موقع العمل الى خارج أسوار القلعة.
- إزالة الحجارة المتآكلة من جدران وأسقف المسجد .
- إعادة بناء الجدران الداخلية وإعادة تكحيلها.

منظر عام للقلعة

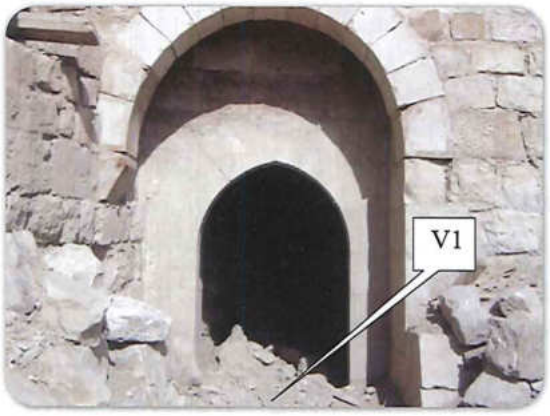


الجدار الجنوبي الغربي بعد الترميم

- البوابة الرئيسية الجنوبية (V1)

تقع البوابة في أعلى الجدار (R12)، و يبلغ ارتفاعها ما يقارب ٥م وبعرض ٢م وكانت بعض حجارة الجدران الرئيسية متآكلة وحجارة القوس العلوي منها. تم ترميم وصيانة هذه البوابة حسب الخطوات التالية :-

- تجريف وإزالة الطمم والأنقاض المتواجدة في المدخل.
- إزالة بعض الحجارة المتآكلة والآيلة للسقوط.
- أعادة بناء الجدران وبناء القوس الخارجي واستخدام حجر البناء المناسب وإعادة تكحيله.



البوابة الرئيسية الجنوبية

. الممرات داخل الأقبية (A2،A1).

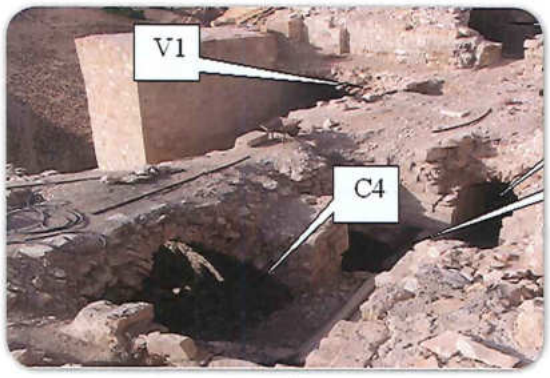
كانت هذه الممرات تربط بين الأقبية الأربعة والعقود القديمة وتشكل ممر للمسجد بطول ٣٥م وبارتفاع ٣م عرض هذه الممرات مابين ١,٥-٢,٠م ،وكان ارتفاع الطمم المتواجد داخل ما يقارب ٢م، وتم ترميم هذه الممرات حسب الخطوات التالية :-

- تجريف وإزالة الأتربة والأنقاض والحجارة من داخل الممرات ونقلها الى خارج موقع العمل
- إزالة الحجارة المتفككة والمتآكلة من الجدران الجانبية.
- إعادة بناء الجدران الجانبية للممرات وذلك باستخدام الحجر المناسب وتنظيف حلول هذه الحجارة وتعبئتها بالخلطة الإسمنتية المناسبة.

. الأقبية

- تم تجريف وإزالة الطمم المتراكم على سطح الأقبية وتجميعها خارج جدار القلعة ليتم نقلها بعد الانتهاء من اعمال الترميم في القلعة

ويقع في الجزء الغربي من منطقة العمل أربعة أقبية مترابطة، أحدهما يمتد شمال جنوب بأبعاد ١٢,٥م طول (اتجاه الشمال) و٤,٦٥ م عرض وبارتفاع ٥,٥م وهي مملوء بالردم والطمم ولهذا الأقبية مدخلان إحداهما في الزاوية الشمالية الغربية بعرض ١,٢٠ م وارتفاع ٣,٠م ومن المتوقع أن يؤدي إلى أبراج الحماية الغربية، أما المدخل الآخر فيقع من جهة الشمال الشرقي وأبعاده ١,٣م عرض وارتفاع ٢,٦٥م ويؤدي إلى ساحة تربط جميع المواقع بعضها ببعض.



الأقبية

اسم المشروع: ترميم وصيانة معسكر اذرح

مشرف المشروع: هاني الفلاحات

تاريخ المشروع: ١/٦- ٢٠٠٦/١٢/٣٠

كلفة المشروع: ٢٥ ألف دينار

عدد العمال: ٣٠ عاملا

مصدر التمويل: وزارة التخطيط

العمل والنتائج:

١- الكشف عن الجدار الدائري المحيط بالبرج الركني الغربي من الخارج وترميمة.

٢- تنظيف محيط البرج من الأتربة والحجارة المتساقطة من أسقف جدران البرج نفسه.

٣- تنظيف الكنيسة من الداخل بنسبة ٨٥٪ وعزل الحجارة في مجموعات حسب مواقعها الأصليه .

٥- ترميم المداميك السفلية في محراب الكنيسة الرئيسي، و ترميم مقاعد الجوقة .

٦- ترميم المحراب الأيمن والذي تساقطت حجارته وبقيت في موقعها وتنظيف الرواق الأيمن للكنيسة.

٧- ترميم محراب الرواق الأيسر وصيانة القصارة التي غطت الجدران الداخلية للكنيسة.

تنظيف الكنيسة من الداخل - اذرح

اسم المشروع: مشروع ترميم المعسكر الروماني / الحميمة

مشرف المشروع: سوسن الفاخري

تاريخ المشروع: ١/٩/٢٠٠٦-٣١/١٢/٢٠٠٦

كلفة المشروع: ١٥،٠٠٠ دينار

عدد العمال: -٣٠

مصدر التمويل: وزارة التخطيط

سير العمل والنتائج

١- الكشف عن الجدران الرئيسية للمعسكر الجنوبي والشرقي.

٢- إعادة صيانة وترميم الجدران بتنظيفها من الاتربه ومن ثم تنفيخها،و تكحيلها وحقنها وإغلاق الفراغات بين الحجارة،بلون كحلة مناسبة للحجر من التربة المحلية للمنطقة.

٣- استبدال الحجارة المنهارة، بحجارة من الموقع وإعادة بنائها مع الأخذ بعين الاعتبار انسجامها مع بقية السور.

٤- سطح السور تم التعامل معه بحذر،لذلك قمنا في البداية بالكشف عنه وتنظيفه من الاتربة،واختيار شحف كبيرة من الحجارة والمتوفرة في الموقع لتسكير السطح وتكحيله خوفا من تسرب مياه الإمطار إلى داخل السور مما يؤدي إلى تلفه على المدى الطويل، أصبحت معالم السور بارزه بشكل أفضل للزوار وكذلك ترميم البوابات.

٥- تنظيف حول المعسكر بشكل كامل ورفع الاتربة الناتجة عن أعمال التنقيبات والترميم وتوثيق الإعمال النهائية للترميم بالصور.

قبل الترميم

...اثناء الترميم

...بعد الترميم

اسم المشروع: صيانة وترميم قلعة القويرة

مشرف المشروع: سوسن الفاخري

تاريخ المشروع: ١/٨-٣٠/١١/٢٠٠٦

كلفة المشروع: ١٥ الف دينار

عدد العمال: ٢٠-٣٠ عامل وفني

مصدر التمويل: موازنة دائرة الاثار

سير العمل والنتائج

١. تصوير القلعة قبل البدء بأية إعمال.

٢. إزالة القصارة الإسمنتية للعديد من الغرف داخل القلعة،و الكحلة الإسمنتية بين الحجارة

٣. تنفيخ الجدران بعد تنظيفها من الاسمنت و تكحيلها بمونة مناسبة للجدران الأثرية عبارة عن طين وقش وهي الخلطة المستعملة في قصارة جدران القلعة الاصلية.

٤.إعادة بناء وترميم البرج الشمالي الشرقي (الطابق الثاني حيث أن الواجهة الحجرية الخارجية مفقودة،لذلك فقد تم إعادة بنائها من حجارة القلعة.

٥. تكحيل الواجهات الخارجية للغرف المحيطة بالساحة الوسطى،بالخلطة الطينية والتبن.

٦. تنظيف الغرف من الطمم وكذلك بقية القلعة وإخراج الطمم خارج القلعة.

البرج قبل الترميم

... اثناء الترميم

نشاطات دائرة الآثار العامة

ندوات / محاضرات / برامج تدريبية / ورش عمل

شاركت الدائرة في عدد من الندوات والمؤتمرات الدولية في مجال الحفاظ على الآثار وحمايتها.

❖ مؤتمرات:

تحت رعاية سمو الأميرة سمية بنت الحسن المعظمة وبدعم من جامعة اليرموك والوكالة اليابانية للتعاون الدولي (جايكا) عقد المؤتمر الوطني الأول للمتاحف الأردنية في جامعة اليرموك في الفترة ما بين ٧-٩/١١/٢٠٠٦م .

شاركت دائرة الآثار العامة ممثلة بمديرية المتاحف والمختبرات وأمناء المتاحف بأعمال هذا المؤتمر لبحث واقع وتطلعات المتاحف لوضع إستراتيجية وطنية موحدة وفق المعايير الدولية. إذ يعتبر دور المتاحف رياديا في حفظ التراث وتقديمه محليا ودوليا بالإضافة إلى التعريف بالهوية الحضارية الأردنية

❖ معارض:

معرض أثار في سويسرا

أقيم معرض للآثار الأردنية في متحف بوبيكون بمدينة زيورخ /سويسرا حيث تم عرض ٧٠ قطعة أثرية تعود لفترات تاريخية مختلفة اكتشفت أثناء تنقيبات البعثة السويسرية في البترا، استمر المعرض ستة شهور في الفترة الواقعة من ١/١٤ الى ١٨/١٠/٢٠٠٦م

في مجال نشر الثقافة الأثرية ونتائج التنقيبات والمسوحات صدرت المطبوعات التالية :

دراسات في تاريخ وآثار الأردن / المجلد التاسع.

- حولية دائرة الآثار العامة- العدد/ ٥٠ / العدد الذهبي .
- مجلة آثار / عدد خاص : متاحف ومعارض.

❖ محاضرات

ضمن نشاط الدائرة الثقافي رعت الدائرة عددا من المحاضرات قدمها خبراء ومختصون وباحثون في مجال الآثار.

❖ التدريب والتأهيل.

استكمالا لبرنامج التدريب والتأهيل الذي بدأته الدائرة وتطبيقا لإستراتيجية الدائرة الهادفة لرفع كفاءة كادر موظفيها وإكسابهم الخبرات العلمية في مجال المحافظة على التراث الأثري عن طريق الاتفاقيات الثنائية مع المؤسسات التي تتعاون مع الدائرة ضمن الخطط المرسومة لهذة الغاية . قامت الدائرة بإلحاق عدد من موظفيها بدورات تدريبية منها :

- ألحق ٤٠ موظفاً من كوادر دائرة الآثار في برامج تدريبية وإدارية ومالية هدفت إلى رفع مستوى أداء الموظف ليواكب برامج التطوير الإداري التي تتبناها الحكومة وخاصة برامج الحكومة الإلكترونية .

- دورة تدريبية في مجال استخدام جهاز(GPS) في مواقع مختلفة في البترا والبيضا وجهاز المساحة(station Total) لرسم واجهات المعالم الأثرية في البترا والبيضا . ممول من صندوق الصروح العالمي(WMF) في الفترة الواقعة ما بين ٢/٥ – ٦/١٥ - /٢٠٠٦ شارك فيها ١٦ مشاركاً من موظفي دائرة الآثار ومحمية البترا ،و محاضرين من إيطاليا ، المانيا وأمريكا ، وقد رعى صاحب السمو الملكي الأمير رعد بن زيد حفل التخريج وقام بتوزيع الشهادات على الخريجين .

- دورة تدريبية على برامج : Filemaker/ Adobe Photoshop

- عقدت دورة تدريبية في الفترة الواقعة ما بين ٢٧/٨ – ٢٠٠٦/٨/٣١ شارك بها ١٨ مشاركاً وهدفت الدورة إلى تدريب أمناء المتاحف في دائرة الآثار العامة على توثيق القطع الأثرية ومعالجة الصور، و قام أمناء المتاحف بعد إنتهاء الدورة بالتوثيق الأسرجة الفخارية وذلك من أجل إصدار كتاب يتعلق بتطور الأسرجة من العصر البرونزي حتى المملوكي الذي سيتم إصداره بالتعاون مع المعهد الفرنسي للآثار ضمن اتفاقية سلسلة آثار الأردن.

اثناء التدريب

افتتاح الدورة

❖ التعاون مع الدول العربية في مجال التنقيب والتدريب .

التعاون مع إمارة دبي.

في اطار التعاون مع الدول العربية وتبادل الخبرات تم الإتفاق مع دائرة السياحة والتسويق التجاري في دبي على إرسال فريق آثاري أردني لأجراء أعمال التنقيب والمسح الأثري في دبي وكان الموسم الأول في شهر كانون الثاني من عام ٢٠٠١، ونتيجة للأداء المتميز والدقة في العمل فقد طلبت دائرة السياحة والتسويق التجاري في دبي أن يتابع فريق دائرة الاثار العمل سنويا وفي أكثر من موقع، حيث تستمر التنقيبات وللسنة السادسة على التوالي.

خالد احمد بن سليم ، مدير عام السياحة و التسويق التجاري و الدكتور فواز الخريشة مدير عام دائرة الآثار أثناء زيارة موقع التنقيب.

التعاون مع مملكة البحرين.

في إطار التعاون وتبادل الخبرات أجرى فريق من دائرة الآثار العامة تنقيبات في مملكة البحرين بموقع سار الذي يتميز بوجود عشرات الآلاف من المدافن التي تعود لنهاية ألاف الثاني ق.م (دلمون)

الشيخة مي آل خليفة في معرض القطع الأثرية

الشيخة مي آل خليفة و الفريق الأثري في موقع التنقيبات

دورة بلاد الشام لترميم الفسيفساء

في إطار التعاون الإقليمي المشترك لحماية الموروث الحضاري وتأهيل العاملين في مجالات الصيانة و الترميم ، عقدت وللموسم السادس على التوالي دورة بلاد الشام لترميم الفسيفساء بالتعاون ما بين دائرة الاثار العامة ومدرسة مادبا لترميم الفسيفساء ومختبر أريحا ودائرة الاثار السورية بدعم من المؤسسة الايطالية جنوب ومعهد الآباء الفرنسيسكان ، وتهدف الدورة الى تدريب طاقم محلي وإقليمي متخصص في المحافظة على الفسيفساء ونشر الوعي بأهمية هذا الإرث الحضاري الذي تميز به بلاد الشام ويشارك في الدورة متدربون من الأردن ، سوريا ، فلسطين ، لبنان ، العراق.

المشاركون أثناء التدريب

❖ التعاون الدولي

نظمت دائرة الآثار العامة بالتعاون مع مؤسسات دولية عدد من الدورات التدريبية في مجال المحافظة على الآثار وحمايتها.

دورات تدريبية للكوادر العراقية بالتعاون مع الوكالة اليابانية للتعاون الدولي JICA

في

المشاركون أثناء التدريب

إطار اتفاقية برنامج التدريب في بلد ثالث والتي تم توقيعها بين وزارة التخطيط والتعاون الدولي الأردنية والوكالة اليابانية للتعاون الدولي لتدريب وتأهيل الكوادر العراقية في مجالات التنقيب والترميم تم عقد دورتين تدريبيتين خلال العام ٢٠٠٦ بالتعاون مع الدائرة حيث أقيمت هذه الدورات في موقع أم قيس الأثري في الفترات:

- ٢/١٧ ولغاية ٣/٢ وشارك في هذه الدورة خمسة متدربين عراقيين.
- ٧/٢٧ ولغاية ٨/٣١ وشارك في هذه الدورة ١٢ متدربا من العراق.

وقد عقدت ست دورات سابقة في إطار هذا البرنامج والذي ينتهي نهاية العام ٢٠٠٧.

إفتتاح البرنامج في مدينة البتراء

الحكومة الأسبانية:

قامت الوكالة الاسبانية للتعاون الدولي التابعة لوزارة الشؤون الخارجية والتعاون والإدارة العامة للتعاون من أجل التنمية في حكومة فالنسيا الإقليمية بعقد دورة متقدمة في الإعداد المهني المتكامل للإدارة السياحية الخاصة بالمصادر الطبيعية والثقافية مطبقة على موقع البتراء / الأردن

في إطار برنامج أزهار وهو برنامج تعاون من أجل التنمية في منطقة حوض البحر الأبيض المتوسط لتحقيق التنمية المتوازنة وحماية البيئة والمحافظة على المصادر الطبيعية وبالتعاون مع الجامعة البوليتقنية في فالنسيا ودائرة الآثار

المشاركون في اسبانيا

العامة ووزارة السياحة والآثار،جامعة اليرموك والجامعة الهاشمية حيث تم التركيز على إدراج الوعي البيئي والوعي حول جودة الحياة ضمن التخطيط السياحي والعمراني والمحلي لمنطقة البتراء إضافة الى تزويد المشاركين بالآليات المناسبة لتخطيط وادارة السياحة في مجال التراث الثقافي.

وتكونت هذه الدورة من خمس مجموعات موزعة على ثلاث وحدات على النحو التالي:

- الوحدة الأولى: شهر حزيران ٢٠٠٦ محاضرات نظرية في جامعة اليرموك وتطبيق عملي في محمية البترا حيث تكونت هذه الوحدة من ثلاث مجموعات:

المجموعة الاولى: المظاهر الإستراتيجية في تخطيط وإدارة مناطق الثروة الطبيعية والبيئية والحفاظ عليها.

المجموعة الثانية: تخطيط الأنشطة البيئية-السياحية

المجموعة الثالثة: إدارة الزوار

- الوحدة الثانية: ايلول ٢٠٠٦ محاضرات نظرية في الجامعة الهاشمية وتطبيق عملي في محمية البتر حيث تكونت هذه الوحدة من مجموعة واحدة.

المجموعة الرابعة: عمليات المشاركة والأثر الاجتماعي والاقتصادي والتنمية المحلية في المناطق التي يوجد بها ثروة طبيعية وتراث ثقافي.

- الوحدة الثالثة: تشرين الثاني ٢٠٠٦ محاضرات نظرية في الجامعة البوليتقنية في فالنسيا / اسبانيا حيث تكونت هذه الوحدة من مجموعة واحدة.

المجموعة الخامسة: الآليات الفنية الخاصة بإدارة المصادر الطبيعية في المقاصد السياحية مع اهتمام خاص الى توفير المياه.

وقد شارك في هذه الدورة التي ستبدأ المرحلة الثانية منها في شهر ايار ٢٠٠٧ ، اربع مشاركين من دائرة الآثار العامة إضافة إلى مشاركين من جامعة اليرموك والجامعة الهاشمية ودولة الإمارات العربية المتحدة.

افتتاح الدورة

- المنظمة العربية للتربية والثقافة والعلوم (الكسو) والمركز الدولي لدراسة صون وترميم الممتلكات الثقافية (ايكروم) بالتعاون مع دائرة الاثار العامة الأردنية والإدارة العامة للآثار والمتاحف السورية.

- تحت رعاية جلالة الملكة رانيا العبدالله عقدت دورة تدريبية إقليمية حول توثيق وإدارة مواقع التراث في المنطقة العربية من ١١/١٨ ولغاية ٢٠٠٦/١٢/١٢م في أم قيس وبصرى ضمن إطار برنامج " آثار" -الحفاظ على التراث الآثاري في المنطقة العربية- وقد شارك في هذه الدورة خمسة وعشرون متدربا" يمثلون ثلاث عشرة دولة عربية (فلسطين،البحرين،تونس،الجزائر،السعودية،عمان،السودان،لبنان،سورية،ليبيا،مصر،اليمن والأردن) . وتناولت الدورة موضوعات تتعلق بخطط صون الممتلكات الثقافية وإدارتها في المنطقة العربية والحاجة الى النهوض بالمعارف التطبيقية الخاصة بهما اضافة لكيفية توثيق مواقع التراث الثقافي واتخاذ الإجراءات اللازمة لضمان حمايتها.

وقد تضمنت الدورة شقين نظري وتطبيقي في الميدان وأشرف على تدريب المشاركين خبراء من كندا،بلجيكا،اسبانيا،ايطاليا،فرنسا،الاردن،سورية،لبنان ومصر.

- المعهد الفرنسي للآثار IFPO

ضمن التعاون المتبادل بين المعهد الفرنسي بعمان ودائرة الآثار عقدت دورة تدريبية مدتها شهر في المركز العلمي لجامعة نيس بفرنسا في مجال أنظمة المعلومات الجغرافية (GIS) تم تدريب أثنين من دائرة الآثار على قراءة الصور الجوية والخرائط .

إضافة الى ذلك تم تدريب عشرة من منتسبي الدائرة في مركز ياقوت بمبنى دائرة الاثار استكمالاً" للدورتين اللتين عقدتا في السنوات السابقة.

- في إطار تعاون دائرة الاثار العامة والسفارة الفرنسية في عمان تم الحاق ثلاثة من موظفي الدائرة ببرنامج) تعليم اللغة الفرنسية للموظفين .

مؤسسة CIM الالمانية

أفتتح في مركز التوثيق والأرشفة الإلكترونية في قسم المعلومات والتوثيق الأثري في الدائرة و ضمن الاتفاقية التي أبرمت مع مؤسسة سم الالمانية (المركز الألماني للتطوير الدولي للشرق الأوسط الألماني) وبموجب هذه الاتفاقية يقوم خبراء مختصون في مجال الأرشفة الإلكترونية بتدريب كادر من موظفي القسم على قاعدة بيانات للتقارير العلمية للمسوحات و التنقيبات .

مدير عام الآثار د. فواز الخريشة يقدم عرضاً لمعالي الوزير و السفير الألماني في مركز التوثيق و الأرشفة

❖ ورش عمل:

ورشة عمل مشروع MEDCULT

عقدت الورشة برعاية عطوفة مدير عام دائرة الآثار العامة و بتنظيم من وزارة الثقافة الإيطالية (منسقة المشروع) و بالتعاون مع دائرة الآثار خلال الفترة من ١٢-١٣/١٢/٢٠٠٦ في دائرة الاثار.

يركز المشروع الذي يمول من خلال برنامج المعلومات للجميع / اليونسكو على نشر نتائج مشروع منيرفا وبخاصة ما يتعلق بمباديء الجودة للمواقع الإلكترونية الثقافية في دول حوض المتوسط، حيث تم عقد ورشتي عمل في كل من المغرب ومصر للعاملين في قطاع التراث الثقافي والمحافظة عليه وعقدت ورشة العمل الثالثة والأخيرة في الأردن.

في اليوم الأول للورشة تم تعريف المشاركين بمشروع منيرفا ومباديء الجودة العشرة للمواقع الإلكترونية الثقافية بالتفصيل ، وفي اليوم الثاني تم التطبيق العملي للمشاركين من خلال تطبيق هذه المباديء على المواقع الالكترونية الخاصة بمؤسساتهم ،إضافة الى إعطاءهم المبادئ الأولية لتصميم موقع إلكتروني لمتحف أو مكتبة أو مدرسة صغيرة.

وجاءت مشاركة دائرة الآثار العامة في هذا المشروع كنتيجة لمشاركتها الفاعلة في مشروع سترابون (٢٠٠٢-٢٠٠٥) وهو نظام معلوماتي وإعلامي متعدد اللغات لتوثيق التراث المحلي وخدمة السياحة في أوروبا وحوض المتوسط، حيث تم إنشاء مركز ياقوت للمعلوماتية من خلال مشروع سترابون وتجهيزه بأجهزة حاسوب متطورة ومرفقاتها لمواكبة التطور في تكنولوجيا المعلومات.

عدد المشاركين في هذه الفاعلية ٢٥ مشاركا من وزارة الثقافة الايطالية، مؤسسة بيت علوم الإنسان / فرنسا، مركز توثيق التراث الحضاري / مكتبة الإسكندرية ،مركز التوثيق والمعلومات التابع لوزارة الثقافة والاتصالات / المغرب، مؤسسة عبد الحميد شومان،دائرة المكتبة الوطنية،وزارة السياحة والآثار، متحف الأردن إضافة الى عدد من موظفي الدائرة.

ورشة عمل تنظيف المعادن

- نظمت دائرة الآثار العامة في متحف الكرك ورشة عمل تعليمية حول تنظيف قطع العملة الأثرية لعدد من العاملين في

المتاحف والمختبرات في دائرة الاثار العامة بالتعاون مع مشروع التطوير السياحي الياباني.

- نظمت دائرة الآثار العامة في متحف الكرك و بدعم من مشروع التطوير السياحي الياباني بالتعاون مع المتحف الوطني ورشة عمل تعليمية عن أهمية الفخار عبر العصور وكيفية تصنيعه وتشكيلة بالطرق الثلاث اليدوية والدولاب والقالب .

المشاركون أثناء التدريب

❖ اتفاقيات

تم توقيع اتفاقية تعاون مع جامعة فلورنسا وذلك لمدة عام قابل للتجديد في مجالات البحث العلمي الأثري وترميم وصيانة قلعة الشوبك وذلك من خلال :

١- تبادل الزيارات بين الباحثين من كلا الطرفين وذلك بعقد الدورات والندوات والمؤتمرات والقيام بأبحاث مشتركة .

٢- تبادل النشرات والمعلومات والمطبوعات

٣- تقديم التسهيلات اللازمة لطلاب الدراسات العليا

٤- التعاون في مجال البحث والنشر العلمي

٥- دعم النشاطات المتعلقة بالتنقيبات الأثرية وأعمال الصيانة والترميم

٦- التعاون وبشكل دوري في تقييم الثروة الأثرية في بعض المواقع الأثرية

المشاركون أثناء التدريب

- توقيع اتفاقية تعاون مع جامعة La Sapienza ومعهد الملكة رانيا للسياحة والتراث/ الجامعة الهاشمية ودائرة الاثار العامة ٢٠٠٦-٢٠٠٨ للعمل في موقع خربة البتراوي من خلال اجراء حفريات وترميم اضافة الى المحافظة على الموقع وتطويره سياحياً.

- توقيع اتفاقية إعارة بين جامعة براون ودائرة الآثار العامة لمجموعة مختارة من بقايا حجر معماري ومواد أخرى من تنقيبات المعبد الكبير في/ البترا / إضافة الى مجموعة دراسية لفخاريات ومواد اخرى مشابهة ، من بينها زجاجيات ، عظام وبقايا معدنية وذلك ليتم عرضها ضمن المجموعات الدائمه لمعهد علم الآثار والعالم القديم لجامعة براون.

وستقدم الجامعة ٥٠ خمسين الف دولار اميركي لدائرة الآثار العامة على شكل منح مالية سنوية مخصصة لأعمال الحماية التاريخية للمواقع الأثرية في البتراء بما فيها الصيانة السنوية للمعبد الكبير.

المشاركون في المتحف الأفتراضي

حفل توقيع اتفاقية استمرار المتحف الافتراضي لمشروع أكتشف الفن الإسلامي ١٧ / ١٠ / ٢٠٠٦

تحت رعاية سمو الأميرة سمية بنت الحسن المعظمة تم التوقيع على اتفاقية استمرار المتحف الافتراضي بحضور تسعة ممثلين للمتاحف الأوروبية (ألمانيا وإيطاليا والبرتغال وإسبانيا والسويد والمملكة المتحدة) بالإضافة لممثلين عن وزراء الثقافة والمتاحف لثمانية دول من دول البحر المتوسط (الجزائر ومصر والمغرب وتونس وتركيا وسوريا وفلسطين والأردن) .

بتنظيم منظمة متحف بلا حدود وبدعم من الإتحاد الأوروبي وضمن إطار برنامج التراث الاورو- متوسطي.

وقد عمل أكثر من مائة وخمسين مختصا من أربع عشرة دولة لإنشاء موقع إلكتروني للفن الإسلامي في دول المتوسط يتضمن ٨٥٠ قطعة أثرية اختيرت من ٤٠ متحفا إضافة إلى ٣٨٥ موقعا ومبنى أثريا اختيرت من أحدى عشرة دولة من جنوب أوروبا وشمال أفريقيا والشرق الأوسط. وتم الاتفاق على استمرار النشاطات المستقبلية خاصة بعد إنتهاء دعم الإتحاد الأوروبي للمشروع وهذه النشاطات تتضمن معارض مشتركة ونشر كتب وأدلة للمتاحف المشاركة في الفن الإسلامي إضافة لإنشاء قاعدة تعليمية للمتحف الافتراضي .

ومن الجدير بالذكر أن اتفاقية « اكتشف الفن الإسلامي» قد شكلت إنجازا تاريخيا عظيما لكونها أول اتفاقية بين الشركاء من الجنوب والشمال تقرر دمج الجهود والعمل معا على قاعدة المساواة والاستقلالية عن الدعم الخارجي.

❖ استملكات

- استملكت دائرة الآثار العامة ٧٠ دونماً في موقع رحاب الأثري بمبلغ اجمالي يزيد عن نصف مليون دينار اردني بمكرمة ملكية من جلالة الملك عبد الله الثاني ابن الحسين المعظم.

- استملكت دائرة الآثار في مختلف محافظات المملكة ما مساحته ٩٥ دونماً ومبلغ اجمالي ٦٦٠الف دينار

Fig.4 : Precinct area with stone circles and architecture (zone 06)

Fig.5 : Wadi umm-Khaskhas

inscriptions over the millennia. Although many of the boulders have short Thamudic period inscriptions and drawings, they are covered with much earlier carvings that probably date to the Neolithic, Chalcolithic, and Bronze Age. Given the position of the boulders (situated squarely at the bottom of a triangular-fan shaped boulder fall), the presence of numerous walls and circular enclosures, and the high-concentration of early figures (gazelle, oryx, cattle) and hunting scenes, it seems likely that this boulder fall area had particular social significance in the pre-Thamudic period.

In the parallel wadis of al-Rumeileh, Um Khas Khas, and ar-Reif, a second methodology was used which provided lower survey resolution but greater coverage of the areas investigated. Team members conducted large "sweeps" through these large and broad wadis, covering much of the area but with relatively low resolution. This methodology yielded a total of 188 sites in the three wadis, many of which were magnificent examples of Thamudic hunting scene/inscription compositions. Although further analysis of site locations is needed, our initial sense is that many of these sites cluster together in "nests" spread throughout the wadis, perhaps marking ancient campsites or watch posts. Many of these "nests" are found at the highest locations within the wadis and are often accompanied by stone circles and cleared areas.

Fig.6 : Thamudic hunting scene / Inscriptions

While the Hafir is not nearly as accessible as Rum Valley or the area of Jabal Kharaza just to the west, there is the potential for developing an "open-air" petroglyph gallery and museum for tourists within the Hafir. Moreover, many of the Thamudic hunting scenes discovered this session are truly artistic compositions and should be preserved as part of Jordan's cultural heritage.

Fig.7 : Petrglyph site covred with patterned ghazal, oryx and humters (zone 06)

Wadi al- Hafir, Wadi Rumm Area

Project Name: Wadi al- Hafir Petroglyph Survey, Session 2
Duration: January 21-January 28, 2006
Number of Workmen: 3
Cost of Project : 800 JD
Sponsor: The University of Chicago, The American Center for Oriental Research
Director: Glenn J. Corbett
Representative: Manal Basiouni

Project Summary

The second session of the Wadi al- Hafir Petroglyph Survey was conducted from January 21 to January 28, 2006. Topographically, the wadi is situated at the interface between the Hisma desert and the Ras an- Naqb escarpment. Historically, it has provided a natural and direct transit corridor for caravans journeying from the northern Arabian desert to the Ma'an plateau and beyond. The project, based in the village of ad-Disa, continues to have two primary aims: first, to revisit and rerecord (using GPS and digital camera) sites in the Wadi al- Hafir recorded by Dr. William Jobling during the Aqaba-Ma'an Archaeological and Epigraphic Survey; and second, to undertake a locational analysis of petroglyph sites around certain "areas of significance" within the Hafir. It was hoped that such an analysis would provide greater insight into petroglyph meaning and function.

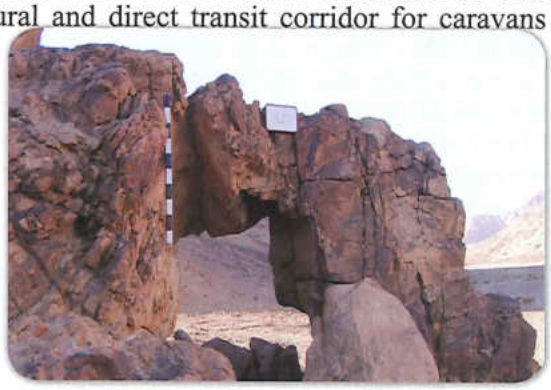


Fig.1 : Al-Batuh Rock Arch (zone 05)

The second session of the Wadi Hafir Petroglyph Survey was focused entirely on a 2.5 km stretch of the central Wadi Hafir, extending from just north of Wadi Khayneh to just south of Wadi at-Tfeif. The primary areas investigated this season included the al-Batuh rock arch (Zone 05), the boulder "precinct" area north of Wadi ar-Reif (Zone 06), and the three parallel wadis of al-Rumeileh, Um Khas Khas, and ar-Reif. Within these areas, a total of 343 petroglyph sites were discovered and recorded.

Fig.2 : Dam 01, north of al-Baluh arch (zone 05)

In this session, two different survey methodologies were used. At both the al-Batuh rock arch and the boulder "precinct" area north of ar-Reif, an intensive pedestrian survey was employed around the immediate vicinity of the "area of significance" (extending around 150m in every direction). This methodology allows for the recovery of nearly every petroglyph site in an area and thus allows for clear distribution patterns to emerge. In the area of the al-Batuh rock arch (Zone 05), the survey recorded 95 sites, the majority of which were situated on an elevated wadi bank north of the arch. Interestingly, many of these sites cluster around the banks of narrow sub-wadis running down from the jebel above. Archaeological evidence of damming and camping was also found in the vicinity.

Fig.3 : Thamudic hunting scene / Inscriptions (zone 05)

The survey recorded 60 sites in the boulder "precinct" area (Zone 06), which is comprised of massive boulders (often several meters in length and height) situated on a flat wadi bank just north of Wadi ar-Reif. These boulders are covered with petroglyphs and served as ideal and accessible canvases for the carving of rock art and

at-Tfeif, where sites tended to cluster in small bunches or "nests" along wadi banks and in open areas or clearings, a phenomenon noted both in earlier sessions and by previous researchers. In both areas, inscriptional remains are extensive and often occur with or in close proximity to extremely detailed and well-executed Thamudic hunting scenes.

More thorough, systematic purposive surveys were limited to three small areas during this session, namely the possibly Bronze Age settlement of Um Sabib in the southern Hafir, the immediate vicinity of a small rujm in the center of the wadi, and an isolated rock outcrop in the Gurra area that had an extremely high concentration of petroglyphs. A total of 54 sites were recorded for these three areas; 20 around Um Sabib, 8 at Rujm 6, and 24 at the Gurra rock outcrop. Um Sabib is especially interesting, as this extremely small area contained an incredibly high concentration of footprint petroglyph sites (15 sites), all of similar style and presumably similar age. Their occurrence in the vicinity of stone enclosures and the near total lack of Thamudic inscriptions suggest the area was a Bronze Age (or possibly earlier) settlement and that the footprint symbol had some particular symbolic potency for the populations of the area.

While the Hafir is not nearly as accessible as Rum Valley or the area of Jabal Kharaza just to the west, there is the potential for developing an "open-air" petroglyph gallery and museum for tourists within the Hafir. Moreover, many of the Thamudic hunting scenes discovered in this session and in previous sessions are truly artistic compositions and should be preserved as part of Jordan's cultural heritage.

Inscription and rock art

Footprint ptroglyph

Inscription and rock art

Wadi al-Hafir, Wadi Rumm Area

Project Name: Wadi Hafir Petroglyph Survey, Session 3
Duration: March 26-April 7, 2006
Number of Workmen: 2
Cost of Project: 1200 JD
Sponsor: The University of Chicago, The American Center for Oriental Research
Director: Glenn J. Corbett
Representative: Suleiman Awad al-Shuqairat

Project Summary

The third session of the Wadi al-Hafir Petroglyph Survey was conducted from March 26 to April 7, 2006. Topographically, the wadi is situated at the interface between the Hisma desert and the Ras an- Naqab escarpment. Historically, it has provided a natural and direct transit corridor for caravans journeying from the northern Arabian desert to the Ma'an plateau and beyond. The project, based in the village of ad- Disa, continues to have two primary aims: first, to revisit and rerecord (using GPS and digital camera) sites in the Wadi al- Hafir recorded by Dr. William Jobling during the Aqaba-Ma'an Archaeological and Epigraphic Survey; and second, to undertake a locational analysis of petroglyph sites around certain "areas of significance" within the Hafir. It was hoped that such an analysis would provide greater insight into petroglyph meaning and function.

The third session of the Wadi al Hafir Petroglyph Survey focused extensively on areas of the 15km long Wadi al-Hafir that had not yet been explored in detail, namely the large sub-wadis of Khayneh, Telat Rashid, and at-Tfeif and the extensive northern branch of the Hafir (the Gurra) which gradually rises to meet the Ras an- Naqab escarpment. In addition, the survey recorded a number of important inscription and rock art sites outside of these main areas, mapped the traditional and well-worn path leading from the Hafir to the Ras an- Naqab escarpment, and acquired many of the local toponyms associated with the topographic features of the wadi. Within the investigated areas, a total of 551 petroglyph sites were discovered and recorded.

In this season, a reconnaissance survey methodology was used extensively for the large sub-wadis that had not yet been explored. While the survey resolution provided by this method is much lower than the thorough and systematic purposive surveys employed in Seasons 1 and 2, this method does allow for much greater coverage of broad topographical features and, ultimately, the detection of meaningful distribution patterns. Using this method, team members conducted large "sweeps" through the sub-wadis of Khayneh, Telat Rashid, at-Tfeif, and the Gurra, covering fairly extensive tracts of these features but with relatively low resolution. In these and other areas, this methodology yielded a total of 497 sites. Of particular interest were the petroglyph remains found in Khayneh and

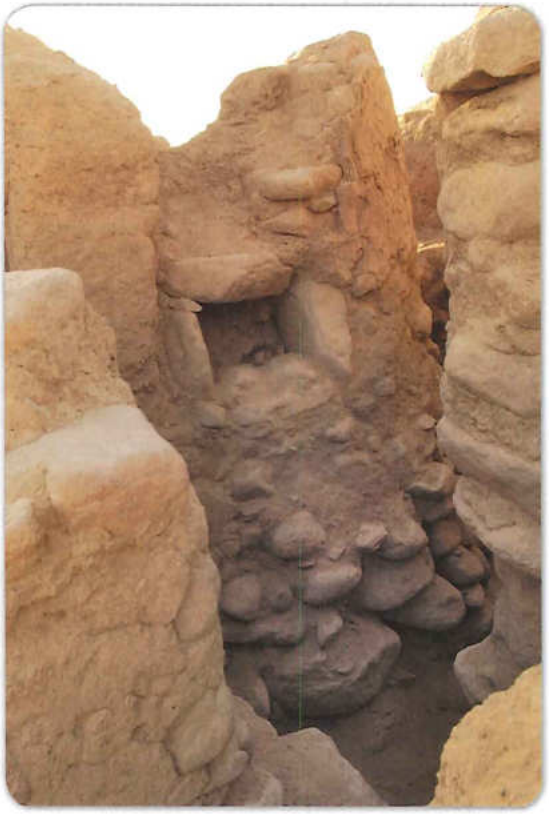
General view of the site

Stone enclosure

Thamudic hunting scene

finger-imprint decorations representing animals. So far, these decorations are restricted to the west of the tall. It is not clear yet whether they were part of cultic rituals. As close analogies can be found in the contemporary rock on the Arabian Peninsula, one may expect a more general function. According to the geo-hydrological investigation one may conclude that Hujayrat al Ghuzlan was rich in water resources, which allowed flourishing agriculture and breeding of sheep, goat and cattle. The site on the alluvial fan of a wadi (Wadi Yitim) with a large catchment area (10.000 square km) was secured by a natural flood protection.

The Team consisted of Florian Klimscha, Kristina Pfeiffer (field directors), Ulrike Siegel, Dorothea Bodenmüller (architects), Siba Ayyoub, Aydin Abar, Kristina Nowak, Ibrahim Fayoumi (archaeologists), Günter Heindl (field technician), Renate Maier, Ali al-Manaser, Christin Keller, Sandra Dreßler (students), and Anna Wittmer (photographer).



Window in Trench C8

Hujayrit al - Ghuzlan

Project Name: ASEYM (Archaeological Survey and Excavation in the Yutum and Magass Area)
Duration: February 4th to March 16th 2006
Number of workmen: 38
Cost of Project:
Sponsor: University of Jordan, German Institute of Archaeology, Berlin
Directors: Prof. Dr. Lutfi Khalil (University of Jordan) and Prof. Dr. Ricardo Eichmann and Prof. Dr. Klaus Schmidt (both German Institute of Archaeology, Berlin).
Representative: Ms. Sousan al-Fakhri

Hujayrit al - Ghuzlan flourished in the 1st half of the 4th millennium BC as an industrial site. An elaborate irrigation system allowed the population to grow cereals in terrace fields and keep not only sheep and goat but also cattle. The production of copper ores from Timna (c. 30 km north of Aqaba) led to cultural connections with Egypt to where oval and rectangular ingots were exported. So far, at least two building periods can be distinguished: A younger phase is represented by a large stone building in the center of the tall. Only few structures connected with that major construction can be clearly attributed to this period. Apparently, during the later period debris consisting of metallurgical and household materials was dumped into the rooms of an earlier occupation. This occupation, which is characterised by mud architecture on stone foundations probably ended as the result of at least two earthquakes, which caused heavy damage in the residential areas. Wall collapse occurs in almost all squares. Parts of the houses were heavily burned. Organic materials are sometimes well preserved, especially plant remains. While the previous seasons provided a general impression of the architecture, the excavation this year produced deeper insights into the architectural construction and stratigraphy of the site. Despite the serious damage caused to the walls by an earthquake, later reuse of the settlement has partially preserved them in parts to more than 4 metres in height. The great destruction that was accompanied by heavy fires caused a filling-up of many of the rooms. Fallen walls are still visible as well as heavily burned bricks. The remaining architecture was integrated into new constructions. Later floor levels, some two to three metres above the ancient foundation level, are indicated by in situ standing pottery vessels. So far it seems likely that the later phase of the settlement was mainly connected to metallurgy. In some parts of the ruins the ancient architecture had been abandoned. New structures, some 13 x 10 metres large with a solid stone foundation cover the ancient mud-brick walls. These constructions represent the second building period. For the first time, three human mandibulae were found. In many places, the wall plaster was smoothened roughly by using hands and fingers. Some of the ancient craftsmen produced

Aerial Photograph of the site

Cleand Trench E7

Column in Trench C8

Conclusion

After five seasons of field work, we can conclude that the site of Aqaba Castle has a much longer occupation history than was know before our research started. It is also clear that its relationship with the site of Ayla has to be reconsidered – certainly on chronological basis. The new fascinating data of course incite us to undertake further research.

From the tourism point of view it would be more than valuable to excavate the rest of the west wing and to reconstruct the northwest corner of the castle in its original form and present the results of the investigation to the general public.

From the scientific point of view, excavations towards the courtyard of the museum would be most interesting for our knowledge of the site·

have a later Mamluk layout. But the existence of earlier structures underlying it opens at least the possibility that an earlier khan/fortification might have occupied the same site. This might have been the fortification to which, according to Abû'l-Fida, the Mamluk governor of Ayla transferred his residence around 1320 when the castle at Jezirat Faraun was finally abandoned. It had possibly been built by al-Nasir Muhammad, though specific documentary evidence for his involvement with it appears to be lacking. As the written documentation remains silent about the origins of the present castle, only archaeology can help to find out if the substructures that underlie it, belong to an earlier fortress or some other building(s) altogether.

The results of the 2006 fieldwork

The 2006 campaign confirms the already established chronology, although for the earlier periods there is more and more proof that the occupation of the site is not just following the abandonment of Ayla but that right from the Ummayad and Abassid periods onwards there was activity in this part of Aqaba (maybe essentially agricultural) and that certainly from the Fatimid period onwards, buildings were located in the area.

The evolution of the site can be determined as follows:

1. First occupation of the site from the Ummayyad period onwards
2. First Khan, ca.1260
3. Second Khan, 14-15 century
4. Third Khan or Castle, c.1515–17/18c.
5. Rebuildings 17c.-18c.
6. Conversion into a military fortress after 1840.
7. Early 20c. & WWI
8. Late 20c. & u/s

Last year it had become clear that the 2nd khan had been rebuilt (possibly after an earthquake). The new data confirm this rebuilding. But the most intriguing discovery might be that the first khans did not occupy the same location as the "castle". As a matter of fact, until this year we considered that the west wings of the 3 khans lay more or less on top of each other. The discovery of an (at least on the inside) circular tower located on the northeast corner of the 2nd khan suggest that this building (and probably also the first one) developed westwards of the actual castle towards the present location of the Aqaba Museum.

Pilgrims flask from Mamluk latrine (16th c.)

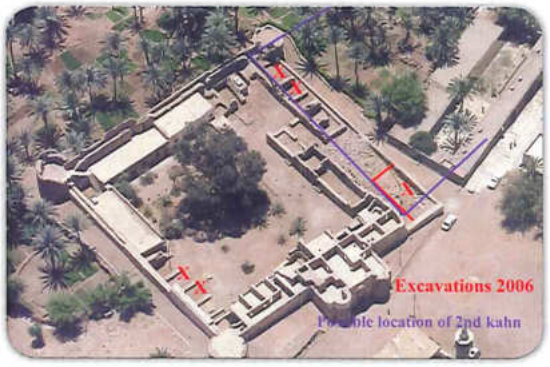
Part of the interior wall of the northeast tower of the 2nd khan.

Aqaba castle

Project Name: Aqaba castle Project
Duration: 6 February – 4 March 2006
Number of workmen: 16
Cost of Project: 7600 JD
Sponsor: Division du Patrimoine du Ministère de la Région wallonne (Service de l'Archéologie), Ghent University, Council for British Research in the Levant, Cardiff University, University of Toronto
Director: Prof. Dr. Johnny De Meulemeester, Reem al-Shqour
Representative: Manal Basuni

The aims of the project

The main aim of the field project was to undertake an archaeological assessment of the Mamluk castle in 'Aqaba. Parallel to the fieldwork (since 2000) an analysis of the historical sources brought new light on the written history of the area and its castles.
The project is supported by the Division du Patrimoine du Ministère de la Région wallonne (Service de l'Archéologie), Namur, represented by Prof. Dr. Johnny De Meulemeester (Ghent University) and by the Council for British Research in the Levant represented by Prof. Dr. Denys Pringle (Cardiff University - Wales). Since 2006, the project is also supported by the University of Toronto represented by Dr. Debra Foran
Since 2003, excavations are carried out in the west wing of the castle to determine whether or not there was any direct structural connection between the earlier phases and the present building and to investigate the chronology of the earlier and more recent phases and their structural interrelationship with the standing building. In 2006, the excavations in the west wing continued and aimed to get a better understanding of the pre-castle structures and their chronology.



Arial photograph with indication of the 2006 excavations and the possible location of the 2nd khan.

The evolution of the different buildings under the castle of Aqaba.

The postulation

Aqaba was occupied briefly by King Baldwin I in 1116-1117, but it was probably not untill the 1150s or 1160s that a permanent Crusader military presence was established. Analysis of the historical documents however, shows that the location of the Crusader castle that Saladin captured in 1170 and subsequently rebuild was on the island of Jazirat Far'awn. The Crusader attack probably gave the final blow to the early Islamic town. Subsequently, in Mamluk times the settlement, called al-'Aqaba (or Aqabat-Ayla) developed in the vicinity of the present castle, suggesting the possibility that an earlier fortification may also have been located there.
The actual standing structures of Aqaba castle, however,

m north south by 2.52 m east west. Here were three hemispherical niches plus one rectangular niche used for drawing water. A subterranean water conduit system leading from the east and exiting to the west was followed at a 2.00 m depth underground for 9.00 m. The finds from this conduit and the well itself were abundant and included 14 coins, beads of amber and faïence, glass (including a Roman head vase), a bone pin, a complete Byzantine lamp, plus a juglet and various vessels that served for drawing water.

This blueprint of a small bath plan appears to have been conceived and developed in the initial phases before the annexation of Petra by Rome. Two complete Nabataean lamps are found in the earliest closed deposits dating to the AD first century through the reign of Malichus II (40-70 AD), offering a terminus post quem for the building of the baths. This evidence suggests that in ca. 70 AD the baths are constructed and were in active use for some 300 years thereafter.

Most special of the 2006 finds in the baths were ten marble Greek inscribed fragments found in the loutron. Also discovered was an intact, footed sandstone stele unearthed in the columned corridor in secondary reuse blocking the water passage from the well room. Besides the inscriptions, 123 objects were recorded of which 93 are coins, 10 inscriptions, plus seven lamps, and a silver bracelet.

Brown University archaeologists included Martha Sharp Joukowsky, Director, Artemis A. W. Joukowsky, photographer, and five supervisors served as most valued staff members, including Emma Susan Libonati, Marshall C. Agnew and Eleanor A. Power, (Surveyors), Christopher A. Tuttle, Tarek M. Khanachet, and Süreya M. Köprülü. Deirdre G. Barrett served as our Registrar-Cataloguer and lamp expert, Christian Augé again analyzed our coins, and Margaret O'Hea spent two weeks at the site as our glass consultant.

The consolidation, preservation and protection of the enormous Great Temple site have been an integral part of our excavation research design from the early years, and various conservation measures have been undertaken annually under the direction of Dakhilallah Qublan our restorer. 2006 was a most rewarding season at the Petra Great Temple with the elucidation of this small and yet impressive Roman-Byzantine Bath Complex. The evidence has helped us establish chronological parameters for the site, and our comprehensive program for preservation underscores the relevant role the Great Temple excavations have contributed to the remarkable city of Nabataean Petra.

Martha_Joukowsky@brown.edu

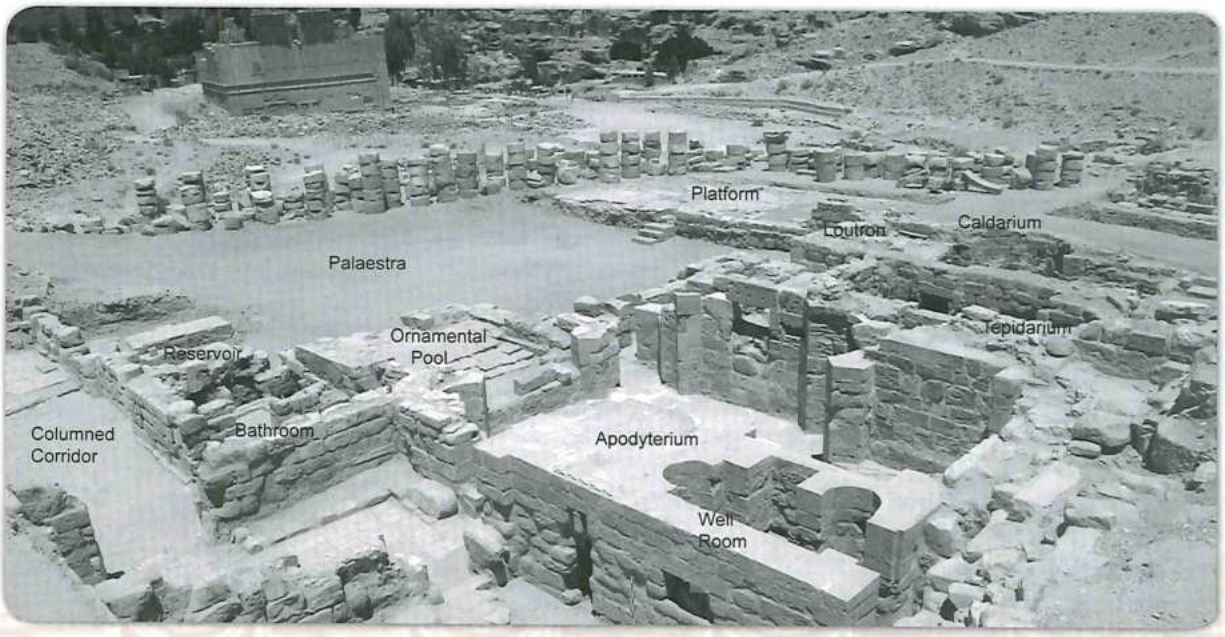


Fig. 2. The Great Temple Roman-Byzantine Bath Complex to northwest (Artemis W. Joukowsky).

Petra Great Temple

Project Name: Brown University Petra Great Temple Excavations 2006
Duration:17/6-3/8/2006
Sponsor: Brown University
Director: Martha Sharp Joukowsky
Representative:Muhammad Marahleh

Fourteen successive field campaigns by Brown University Petra Great Temple archaeologists have been conducted between 1993 and 2006 in various sectors of the Great Temple precinct. Numerous trenches were excavated in 2006 focusing on a small Roman-Byzantine Bath Complex to the west of the Great Temple. Figure 1 presents the 2006 site plan.

We also elucidated the stratigraphy of the Theater in the Great Temple. In the Theater two rows of cavea seats were removed and a sondage was excavated to a 5 m depth to expose the stratigraphy. Found were earlier structures predating the distyle in antis temple construction that were assigned to Great Temple Site Phase I or to the early first century BC.

In the 2006 excavations of the Upper Temenos West Precinct Wall were recovered more of the elegant Roman-Byzantine Bath complex excavated in 2005. To the north a platform was discovered, and moving north to south, at least two caldaria, a loutron (cold water washing room), a praefurnium and a tepidarium. Below the caldaria floor level a partially sunk service corridor isolated the baths from the Great Temple West Exedra. To the south of the heated rooms was an elegant marble-clad room with semicircular features at each of its four corners—an apsidal frigidarium. Just beside it was an ornamental pool, an elaborate well with semi-circular cavities for drawing water, an apodyterium, bathroom (toilet to seat six persons), a small cistern, and a columned colonnade fronting on a probable palaestra-gymnasium. This was a small, compact bathing facility, a balneum, 32 m north south-by-28.40 m east west or 908.80 m2 as excavated. Twenty-two rectangular and square rooms appear to follow the Pompeian type of bath plan with a simple row of windowed parallel rectangular rooms overlooking the palaestra to the west. An aerial photograph appears in Figure 2.

One of the caldaria measured 4.55 m north south-by-13.00 m east west. In the debris was a well preserved hypocaust chamber with a suspended floor above two vaults constructed at the same level as the hypocaust columns, both with round and square piers. Here was also found a partial Latin inscription, an iron horse harness, a silver bracelet and a carnelian bead.

Of particular interest was the well room measuring 1.93

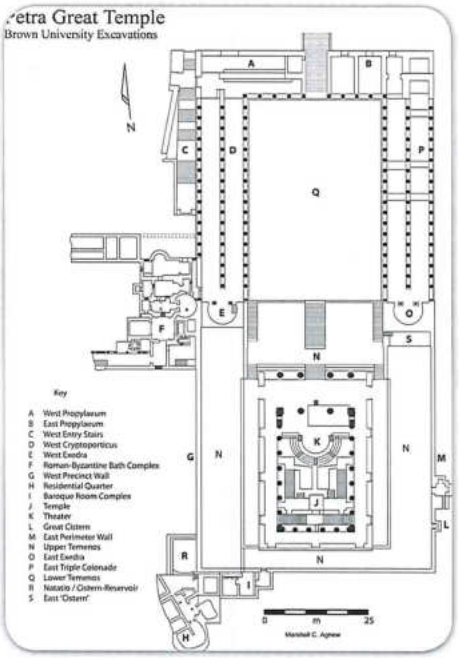
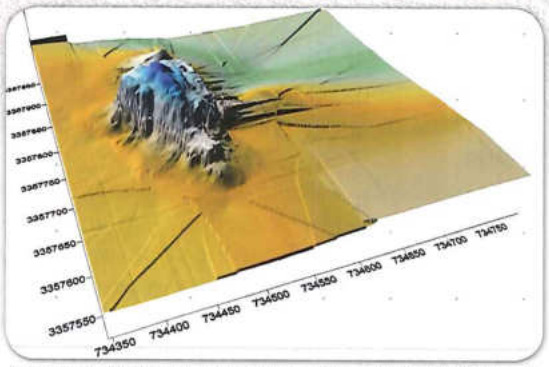


Fig. 1. Plan of the 2006 Petra Great Temple Excavations.

only from written sources.
The comprehensive study of area 24000 and cf 2, 24 and 32 brought light to one of the most interesting rebus of medieval Shawbak. What was the topography and use of the lower fauburg?
The discovery in 2005-2006 of a small chapel located at the base of what was a crusader tower on the third ring wall seems to clarify the settlement structure of knights Hospitallier's facilities at the castle (attested in written sourced after 1140s). Besides, the discovery of a cylindrical tub with a lower connected oven, blocking the original access to the Hospitalliers' chapel provided the necessary clue for understanding the Mamluk production plant that occupied the area between the lower church and the chapel in 14th century. The current hypothesis is that the unearthed infrastructures could be referred to a dyeing plant.



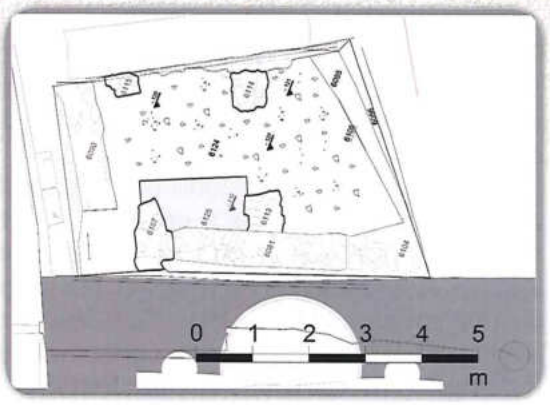
Al-Habis: Digital Terrain Model of the site by D-GPS and motorised Laser total station (elaborated by CNR-ITABC Rome)

Touristical benefits

The foreseen restoration of the Mamluk dyeing plant will allow tourists to visit a very rare and well preserved example of late-Islamic production plant which is quite a unique within Transjordan.

Objectives of the project

The Project aims at investigating the medieval settlement in the area of Edom and particularly the Petra-Shawbak region.
The methods adopted are those of recent Italian 'light archaeology' based on an integrated system of light readings (archaeology of upstanding buildings, landscape archaeology, environmental readings etc.) excavations and ICT data management system.
The focus case studies are: Al-Wa`ira and Al-Habis for the area of medieval Petra; Shawbak for the inner region.



Shawbak: final plan of area 6000 after the excavation.

Area explored this season

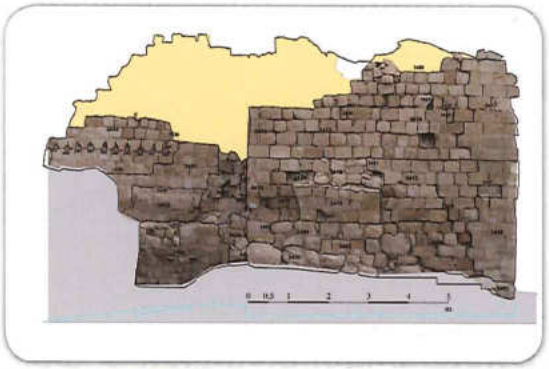
Excavations:
Shawbak, area 6000 – stratigraphic analyses of the deposits nearby the southern (3rd) ring-wall. Chronology: Ayyubid – Ottoman [completed]

Shawbak, area 10000 – stratigraphic analyses of the deposits between the first and second ring-wall by the Crusader upper church. Chronology: Roman/Byzantine – Ottoman [to be completed]
Shawbak, area 24000 – stratigraphic analyses of the deposits of the southern chapel cf 24. Chronology: Crusader – Mamluk [completed]


Shawbak: the Mamluk dyeing plant (general view)

Light readings:

Shawbak, cf 2, 32, 24 – Knights Hospitallier settlement in the lower fauburg later transformed into a Mamluk Dyeing plant
Shawbak, cf 3 – Fortified gate of the first ring wall (final check of the archaeological reading)
Al-Wu'ayra – cross-checking of the topographic readings of 2005
Al-Habis – photogrammetric and aero-photographic mapping of the Crusader remains


Shawbak: archaeological analyses of the western elevation of the fortified gate of the first ring-wall

Significant results

The excavation of area 10000 provided definitive evidence of the Antique settlement on the hill of Shawbak prior to the Crusader castle setting. From the completion of the excavation it will be possible to date the different pre-crusader phases so-far identified.
The analyses of area 6000 contributed in understanding the process of destruction and refortification undergone by the site between 1189 and 1297 known untill now

Al-Habis, Al-Wa`ira– Petra

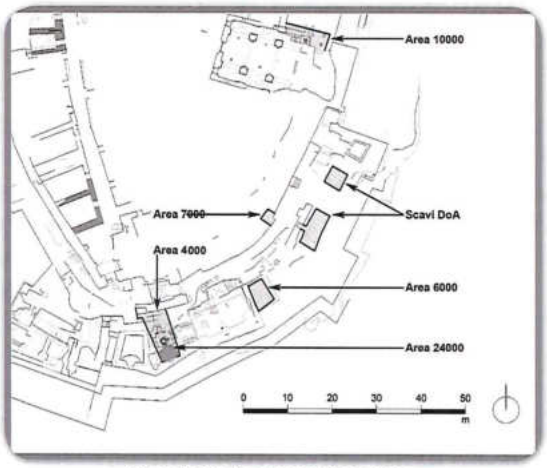
Project Name: Medieval Petra – Shawbak Project
Archaeology of Crusader-Ayyubid settlement in Transjordan
Duration:10 weeks
Number of Workmen:15 workmen + 30 researchers
Coast of the Project :
Sponsor (s): University of Florence (Italy) and the Department of Antiquities
Director of the Project:Prof. Guido Vannini
Representatives: Muhamad al-Khatib, Salem al-Dhyab

Geographical location;

District of Ma`an, medieval area of Edom, Petra-Shawbak region

Historical background;

The Crusader reoccupation of the area of the ancient and Byzantine limes arabicus in the light of the expansion of the Latin Kingdom of Jerusalem produced between 1100 and 1118 a notable shift in the settlement patterns of the considered region.
In particular the innovative setting up of European-styled fortified villages, generally known from written sources as castles, gave the region of Edom a completely new role within Transjordan and Outremer.
With the strongholds of Petra (mainly Al-Wu'ira and Al-Habis but also smaller settlements as Wadi Farasa, Hormuz etc.) and Shawbak, the Latin kingdom did in fact re-establish a Frontier towards the eastern desert that matched topographically (if non in its functioning) the ancient limes arabicus.
By so doing Transjordan came to hold a strategic position in controlling the major trade routes between Egypt and Syria (notably the 'Darb as-Sultani and the ancient 'Traiana Nova') that was preserved to the region also after the Crusaders were defeated by the Ayyubids and that persisted still later, under the Mamluks.
This process is clearly visible at Shawbak, a castle founded by king Balwin the first in 1115 on top of a ruined Byzantine stronghold, whose role was going to be enhanced under the Ayyubids (which build the grandiose government palace in the northern area) and the Mamluks (who refortified the castle in 1297 with monumental ramparts).
What seems fairly clear from the 'medieval' assets of Transjordan is that the 're-surfacing' of its traditional role of Frontier-land (both between the Mediterranean and the Desert, as well as between Syria and Egypt) gave the region a specific and strategic place in the area that can be considered one of the original roots of present-day Jordan.



Shawbak: the excavation areas


Shawbak: the area 6000 at the end of the excavation in 2006.

small assemblage of mixed flint artefacts.
Trench 16 (figs 4,5) was excavated in a well defined boulder channel located to the North of the WF4 system. This trench, measuring 1x1m was located between large boulders forming the edge of the channel. The upper levels of this trench primarily contained Roman/ Byzantine/Nabatean pottery although occasional sherds of Bronze Age/Chalcolithic material were also present. A coin was also recovered. Lower levels produced a relatively rich chipped stone assemblage, most likely of Late Neolithic date.

Trenches within the fields (Trenches 12, 14, 15, 17-20) Fig 6

These trenches were dug into the fields of WF4, primarily to recover sediment samples for phytolith analysis. All trenches were 1x1m and were excavated until natural, archaeologically sterile deposits were reached. Very few artefacts were recovered from these trenches, which is interesting given the dense artefact scatters located on the field surfaces. The excavated sediments were generally hard, pale brown sandy silts which became increasingly 'cemented' by calcium carbonate with depth. Trench 20 is of note as this was located against a terrace wall in the fields immediately below the mill at the East end of the WF4 system, in this trench we discovered probable traces of an earlier terrace wall. Once excavated and recorded samples were collected from exposed sections for phytolith and geochemical analysis.

Discussion

This short field season has yielded many samples for laboratory analysis as well as providing information regarding the manufacture of many of the features within the field system. For example, it seems likely that the channel sampled by trench 11 has undergone several phases of use and repair and was originally a natural wadi channel.

References

Barker, G., Adams, R., Creighton, O.H., Daly, P., Gilbertson, D.D., Grattan, J.P., Hunt, C.O., Mattingly, D.J., McLaren, S.J., Newson, P., Palmer, C., Pyatt, F.B., Reynolds, T.E.G., Smith, H., Tomber, R. & Truscott, A.J. 2000. Archaeology and desertification in the Wadi Faynan: the fourth (1999) season of the Wadi Faynan landscape survey. Levant 32 p27-52.

Fig.4 : Location of Trench 16

Fig.5 : Post excavation view of Trench 16

Fig.6 : Post excavation view of Trench 12

Wadi Faynan

Project Name: Water, Life and Civilisation
Duration: 28 April – 5 May 2006
Number of workmen: 3
Cost of Project: 1240 JD
Sponsors: University of Reading, Council for Britihs Research in the Levant, Leverhulme Trust
Director: Dr Sam Smith
Representative: Mohammad al-Zahran

Aims of field season

The aim of this field season was to collect sediment samples from various locations within the multi-period (Early Bronze Age–Byzantine) WF4 fieldsystem previously explored as part of the Wadi Faynan Landscape Survey Project (Barker et al 2000). We hope that analysis of the soil chemistry may allow us to identify how the fieldsystem was irrigated. In particular, we hope to ascertain whether the fields were irrigated with spring water or water from local rainfall/runoff. A second purpose of the analyses is to look for the presence of phytoliths within the sediment. If present, phytoliths may enable us to work out what crop species were being grown within the fields and also shed light on the efficiency of the irrigation system.

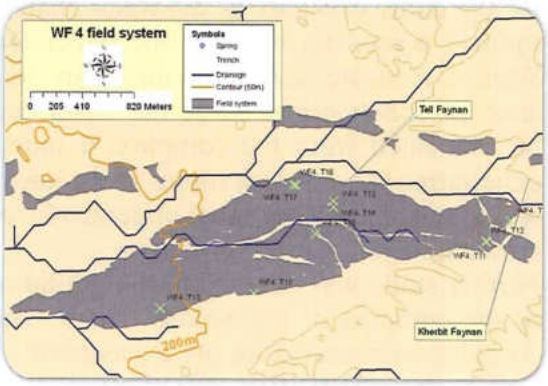


Fig.1 : Plan of Trenches excavated within WF4 field system

Methodology

In order to examine changes in water management practices over time, we excavated in several different areas of the field system, as Barker et al have shown that different areas were in use during different periods. We excavated in water transport channels, which should provide evidence of the source of the irrigation water, and within fields themselves, to recover phytoliths. The location of trenches is shown in figure 1.

Fig.2 : Location of Trench 11 within water channel

Trenches within the water channels (Trenches 11, 13 & 16)

The purpose of these three trenches was to collect bulk sediment samples from exposed section faces for geochemical and phytolith analyses.

Trench 11 (figs 2,3) was dug to the East of the field system in a well defined boulder channel. The trench measured 4x1m and was approximately 1m deep. Excavation revealed that the channel had undergone several stages of use and repair and was, probably, originally a natural drainage wadi channel. Roman/Nabatean pottery was recovered from most contexts excavated here along with, presumably residual, Bronze Age/Chalcolithic pottery and some flints.

Trench 13 was excavated in a probable channel, or terrace, towards the centre North of the WF4 system. The trench measured 3x1m. Roman and Nabatean pottery were recovered during excavation along with a

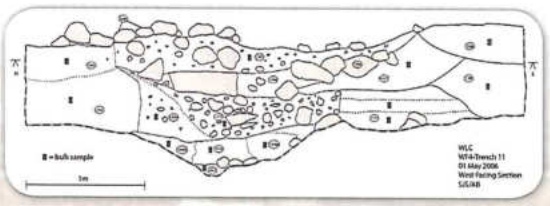


Fig.3 : Post excavation section of Trench 11 showing location of bulk Samples

rather big stones upon which the mortar bedding was applied. When room 4 was constructed, a Nabataean water channel running underneath it was blocked. This caused a massive disturbance of the water management for the entire complex as the water channel underneath room 4 served to evacuate the water from the entire Wadi, a measure absolutely necessary to have a stable area for construction. Since the water could no longer be evacuated from the complex, it must have started penetrating the different rooms in the northern area. The water must have penetrated underneath room 4 as well, creating major stability problems.

Further study was devoted to the digital reconstruction of the complex of the Soldier Tomb. The plan of the complex as revealed by the excavations since 2000 as well as the information gained by several architectural members and structures discovered so far, lead to an overall reconstruction of the complex as proposed on figure 4, with, of course, some uncertainties as for the upper parts and especially the roofing of the upper floor.

Fig.4 : Wadi Farasa East, overall reconstruction of the complex of the Soldier's Tomb (Wirth & Wirth architects, Basel) (Schmid)

Wadi Farasa East, Petra

Project Name : The International Wadi Farasa Project
Duration: August 20 to 31, 2006
Number of workmen: 9
Cost of Project: 1,930 JD
Sponsors: CNRS (French National Centre of Scientific Reasearch) and the French Ministry of Foreign Affairs
Director: Stephan G. Schmid
Representative: Samia Falahat

The field season 2005 of the International Wadi Farasa Project (IWFP) lasted from August 20th to 31st. The IWFP 2006 was carried out by the Association for the Understanding of Ancient Cultures (AUAC: www.auac.ch), based in Basel (Switzerland).

A square was opened at the emplacement of the N-porticus of the complex (Fig. 1) to facilitate circulation for excavation activities inside the rock carved room underneath the rocky outcrop in the NE-corner of the complex. Several walls constructed in a rather careless technique started appearing on a surface measuring roughly 4.30 m by 6.50 m. They obviously form two rooms as well as a kind of corridor. This corridor leads to a rock cut room, a few visible steps indicating that the level of the latter was lower than the one of the former.

The careless building technique with reused stones combined with the presence of an important amount of so-called Ayubid-Mamluk pottery, dating to the 11th to 13th centuries AD indicate a Medieval date for these constructions. This, together with the results of previous campaigns shows that the complex of the Soldier Tomb was reused during the period of the Crusader presence in Petra, probably as a small fortification (for the Soldier's Tomb complex in the Medieval period see Schmid 2006).

In the Roman period a substantial oven or taboun was directly constructed on the bedrock inside the above mentioned rock cut room (Fig. 2). This circular taboun measures about 90 cm in diameter and was built using a soft reddish clay, strengthened by bricks and fragments of transport amphorae. Around and inside the taboun a large amount of broken pottery was found, as well as some sherds coming from the construction of the taboun itself. This pottery indicates a date in the Roman period for the construction of the oven.

A small sounding was made in the northern part of room 4 (Fig. 3). It soon became apparent that the room underwent some changes after its construction. Most of the floor slabs are constructed upon a fill consisting of

Fig.1 : Wadi Farasa East, Medieval rooms upon the N porticus of the complex (Schmid)

Fig.2 : Wadi Farasa East, rock cut room underneath rocky outcrop in NE corner of the Soldier Tomb's complex with taboun (Schmid)

Fig.3 : Wadi Farasa East, small sounding in room 4 (Schmid)

Wadi as-Sadda

Project Name: Wadi as-Sade Surrounding Project (Petra District).
Duration: 19-29 September 2006
Number of Workmen: 2
Cost of Project: 1000 JD
Sponsor: Department of History, Grand valley State University
Director: Prof. Ulrich Huebner, University of Kiel, Germany
Representative: Talal al-Amareen

The main goals of the 2006 survey season were the continuation of the research of the former campaigns:
1. In continuation of the 2003-2005 campaigns the Edomite/Iron Age II settlement Umm al-Ala on a high plateau above Wadi as-Sada was revisited. The plans of the architectural units were controlled.
2. In the Wadi as-Sada the little Nabataean village on the southeastern foot of the so-called Nabataean „Temple Mount" was surveyed and an initial partial survey was made.
3. The ancient way down from Jabal Qarun through Wadi Abu Mureire along Tur Imdai (with a small Nabataean sanctuary on its top (pottery of the 1th - 2th century AD) and farmhouses on its northern foot) to Qasr Umm Ratam was surveyed. Then the long ancient way from Qasr Umm Ratam through Wadi Umm Ratam to Abu Khushayba (and Wadi as-Sada) was partiallay surveyed. On a high mountain at the watershed between Wadi Umm Ratam and the wadis flowing towards Abu Khusheibe a strong watchtower (ca. 6 x 6 m) from Roman time was discovered (ca. 2th - 4th century AD), once controlling the important route from the region around the Roman fort and the copper mines at Umm al-`Amad in the south via Qasr Umm Ratam to Bir Madhkur and Faynan in the north.

Umm Ratam Tower from SW

Umm Ratam Tower from North

Wadi as-Sada from NE

Umm al-'Ala from SW

seems more likely that it served as a barrage for basin irrigation taking advantage of the flat terrain. The next question is the date of this unique feature, but the scarcity of any datable in situ finds makes it difficult to give a clear-cut answer to this question. The occurrence of naviform cores, a hallmark of the PPNB flint industry, from the relevant layer is intriguing yet far from conclusive in view of the alluvial nature of wadi sediment. Thus the only clue is stratigraphical comparison with the other dated components within the site, which suggests that the barrage was constructed on the same layer as that on which the PPNB outpost was founded. This means that both of these two structural entities were roughly contemporary and closely tied with each other.

Given the suggested function and date, it follows that small-scale cereal cultivation based on primitive basin irrigation was incorporated into the subsistence strategy of the PPNB seasonal outpost in the middle of Hamada. This may explain the reason why the outpost yielded ample evidence for reaping and grinding tools despite its harsh site setting. It is also reasonable to assume that a stable subsistence including cereal cultivation is essential to the maintenance of a settlement in Hamada.

Though cursed by bad weather, this excavation season has yielded sufficient results. We may possibly have found the earliest evidence for an irrigation system in the Near East as well as in Jordan. The next season, scheduled for this summer, would hopefully provide further evidence to make our tentative view more persuasive.

Wadi abu-Tulayha

Project Name: A Barrage System at Wadi Abu Tulayha: Evidence for Small-scale Basin Irrigation in the al-Jafr Basin
Duration:25/3-13/4/2006
Number of Workmen: 10
Cost of Project:1750 JD
Sponsor: Kanazawa University
Director: Sumio FUJII
Representative:Hani el-Falahat

Wadi Abu Tulayha is a small, composite site lying in the northwestern part of the al-Jafr basin in southern Jordan. It was first located during our 2001-2002 winter season survey and was excavated twice since the spring investigation season in 2005. Our previous investigations revealed that it consisted of the following three distinct components: a small Late PPNB seasonal agro-pastoral outpost, a pair of Early Bronze Age cist enclosures, and a long (ca. 150 m), roughly V-shaped, freestanding wall yet to be dated for certain. Since the first two components were examined in the last two seasons, this season was focused on the last feature, a possible key to exploring the subsistence strategies of the PPNB outpost (fig 1).

Fig.1 : Wadi abu-Tulayha PPNB outpost

The excavation at the easternmost converging point (Area A) has shown that the wall of this key part, being two rows wide (ca. 0.5-0.8 m wide) and three to four courses high (ca. 0.3-0.5 m high), was solidly constructed with unhewn limestone cobbles ca. 20-50 cm long (fig 2). (Nonetheless, the volume of fallen stones suggests that it was originally a few courses higher.) Fist-sized stones were compacted between the two-rowed walls for filling material. Interestingly, evidence for wall maintenance was attested at the easternmost part, where a semi-circular, solid wall was added anew to the front of the broken part. On the other hand, the guiding walls at both flanks (Area B and C) proved to be much simpler in construction, being usually of a single row and course. The investigation proved that, overall, this simplification became more noticeable as one comes close to the both ends of the wall.

Fig.2 : Wadi abu-Tulayha Barrage 1

In light of the unique location across a wadi and the V-shaped morphology opening toward the upstream, there is little doubt that this elongate feature served as a barrage to collect seasonal runoff water of the wadi. It also supports this functional identification that the guiding walls extend roughly in parallel with contour lines. Also suggestive is the solid construction merely at the converging point, which can best be understood as an essential device to bear sideways water pressure. Thus, the question is the specific use of this water catchment facility. In view of the arid site-setting, a likely major use is to maintain drinking water. However, the use for a reservoir seems questionable, because the walls, constructed with dry walling technique, are too drafty to impound water. Both the flat topography and the large evaporation rate in the al-Jafr basin also cast doubt on such use. Rather, it

provides a key to clarifying the internal structure of the outpost. In addition, a few common traits were recognized between the two sectors, including the custom of entrance sealing during the long absence of dwellers, the installation of a clay-lined large hearth in front of the entrance of larger structures, and the repetition of reinforcement work to cope with wall leaning due to sideways soil pressure. It is noticeable, however, that, in the eastern excavation sector, unlike the western one, the two distinct components were not connected with each other by means of a narrow indoor passage but dissected in access.

Aside from these major structures, the excavation sector EII produced a cluster of temporary sheds constructed with a single row and course of undressed limestone cobbles. In light of their simple structure and the scarcity of finds, it appears that they served as provisional housing for transhumant people who took charge of the construction of the first structural complex around Unit-03. Of interest was the fact that such a cluster was found only at this excavation sector, a possible suggestion that it represents the beginning of transhumance in this area.

Finds

The finds included chipped flint implements and groundstone artifacts as two major categories.

The flint artifacts were based on the naviform core and blade technology, a hallmark of PPNB flint industries, and included a variety of implements such as points, arrowheads, sickle blades, burins, side- and endscrapers, drills, notches, denticulates, picks, hoes, axes, and adzes. What characterized this assemblage was the predominance of hunting weapons, which indicates that, along with herding and cereal cultivation, hunting was among major options of the subsistence strategies of this outpost.

The groundstone artifacts consisted primarily of querns and grinding stones made of either limestone or flint slabs. In addition, they included rubbing stones, arrowshaft-straighteners, grooved stone weights, and game boards as minor components.

The miscellaneous objects included fragments of crystal and malachite, shell beads, stone bracelets, and small clay objects. Bone tools such as awls and spatulas also occurred in limited numbers. The site also yielded faunal and floral remains, which will hopefully provide basic information on the subsistence strategy of the outpost.

All finds are stored in our house at al-Husayniyya. Although they are yet to be closely examined due to time constraints, some of them were drawn and photographed for a preliminary report.

Concluding Remarks

Wadi Abu Tulayha PPNB outpost is probably the first to provide a specific key to tracing the process of the pastoral nomadization, an essential issue for Near Eastern archaeology as well as that of Jordan. Although the previous three field seasons yielded a series of suggestive date sets, part of the outpost still remains to be excavated. The fifth and last investigation season is scheduled in the next summer.

Wadi Abu Tulayha

Project Name: The 2006 Summer Excavation Season at Wadi Abu Tulayha (The al-Jafr Basin, Southern Jordan)
Duration: August 5 through September 30 in 2006,
Number of Workmen: 25
Cost of Project:3550 JD
Sponsor: Kanazawa University
Director: Sumio FUJII
Representative: Muhammad al-Zahran

The site of Wadi Abu Tulayha (JF-0155) was initially found during our 2001-2002 winter season survey and is a small composite site in the northwestern part of the al-Jafr basin. There have been three previous excavation seasons, in the spring and summer of 2005 and the spring of 2006. The investigations have shown that it consisted of the following three distinct components: a sizable PPNB agro-pastoral outpost occupying the northwestern corner of the site, a pair of Early Bronze Age burial cairns (or cist enclosures in our terminology) overlying the outpost, and a barrage system probably dated to the same horizon as the neighboring outpost. This fourth excavation season at Wadi Abu Tulayha season was focused on the excavation of the eastern half of the outpost that had been left intact in the previous investigations. What follows is a brief summary of the excavation results.

Structural complexes Area E-1

General over view of the site eastern excavation sectors

The excavation

The excavation was conducted based on a 5 m by 5 m grid and locus system that covers the whole extent of the site. Local workers, about ten in average, took charge of digging, under the supervision of qualified team-members.

Three excavation sectors, E-I to E-III, were set up so as to cover the supposed extent of the eastern half of the outpost. The excavated area totaled ca. 600 square meters and the volume ca. 300 cubic meters. Although excavated soil from fill layers was discarded without any special treatment, part of the floor deposits, including hearth contents, were put through a sieve with 3 mm mesh in order to improve the precision of the recovery of faunal and floral remains. Since the site stratigraphy was almost the same as that of the western excavation sector, it is omitted here. (For details, see the previous season's report.)

Structural remains

The excavation revealed a few dozen stone-built, semi-subterranean structures of various dimensions and layouts. What characterized them was that a large oval or rectangular structure was combined with multiple small round structures, thus forming a few heterogeneous structural complexes (figs 1, 2). This trait is common to structural complexes at the western excavation sector and, in this sense,

detailed survey and excavation of three tumulus clusters in the survey area.

The excavated areas revealed valuable information concerning the occupation and phasing of the site. Area A4 (Fig. 2) was placed on the north western side of the site to investigate the nature of the round casemate wall forming the centre of the site and its relationship to the second rectilinear casemate wall surrounding the site. Areas B2 (Fig. 3) and B3 (Fig. 4) on the south eastern side of the site were placed to investigate the structures closest to the centre of the site and to clarify the location of internal and external spaces identified in the 2005 season in relation to a possible entrance to the site in this area.

The surface survey collected ceramics and lithics from 50 10x100m transects, which included sites and field systems situated in the different environmental zones of the survey universe. The use of aerial photography to identify areas of interest for sampling proved particularly successful, as many previously unknown sites were discovered through this method. A number of large Iron Age sites were found, in addition to the location of various classical and medieval sites, substantial pottery scatters dating to the Chalcolithic/Early Bronze Age, and lithic scatters dated to the Palaeolithic and Neolithic periods. The results of the survey were mapped using GIS, with an emphasis on correlating this data with topographical, geological, hydrological, climatological, and vegetational information to allow detailed investigation of landscape use through time, especially with regard to the Iron Age II period.

The survey and excavation of three extensive rijm tumulus tomb clusters identified in the 2005 SJIAP season revealed important information about this previously undocumented mortuary landscape in southern Jordan. A total of 519 rijm were mapped and recorded, and several distinct types were identified, the majority being large, oval, rubble mounds incorporating the natural slope. Many features contained visible architectural elements, such as curved walls, internal cells and chambers. Test pits were dug in eight tumuli, including one mound that had been cut by bulldozing activity from an adjacent olive grove. Excavations in this mound revealed an adult burial, in which the body had been placed on its right side in a shallow east-west grave set into bedrock and covered by three slabs and an upright stone (Fig. 5). The articulated skeleton was in excellent condition, and a copper-alloy ring found on the fourth finger of the right hand still retains attached fragments of cloth. A large ground-stone ring was found next to the grave, and some small sherds were found within the grave fill. The burial probably dates to the Classical period based on provisional analysis of these finds. No other such mortuary monument has been excavated in southern Jordan, and further rescue excavation is essential considering the encroaching olive grove.

Fig.4 : Overview of Trench B3, facing South East

Fig.5 : Tumulus Tomb 506, facing South

Fig.6 : Skeleton 01 in Tumulus Tomb 506, facing West

Khirbat ad-Dabba

Project Name: South Jordan Iron Age II project
Duration: 10/7/2006 and 14/8/2006
Number of workmen:10
Cost of Project: 4,011.50 JD
Sponsors: Council for British Research in the Levant, the Seven Pillars of Wisdom Trust, the Carlyle Greenwell Bequest, and the Near Eastern Archaeology Foundation
Director: Dr Charlotte Whiting
Representative: Adnan Rafa'a

A team of 13 archaeologists conducted the third season of excavations and survey at the Iron Age II site of Khirbat ad-Dabba in southern Jordan (Fig. 1). Team members included archaeologists from CBRL, the University of Durham (UK), the University of Liverpool (UK), the University of Sydney (Australia), the University of Western Australia, the University of Poznan (Poland), the University of Geneva (Switzerland), and the Archaeological Field Unit of Cambridge County Council (UK).

Khirbat ad-Dabba is located in the Wadi al-'Arja (UTMN 744085/UTME 3365906) between ash- Shawbak and Wadi Musa in southern Jordan. The site is 4.6 ha in size and comprises of substantial stone-built structural remains surrounded by two intersecting casemate walls. Within the context of the Iron Age sites surrounding it, Dabba represents a major site in terms of size and complexity. The survey universe in the region surrounding Dabba covers an area from ash- Shawbak in the north to Wadi Musa in the south and focuses on archaeological features identified from aerial photographs of the area (Royal Jordanian Geographical Centre 1:10,000 series) which includes sites, tumulus tombs, field boundaries, and long linear features/wall lines.

The aim of the project is to enhance our understanding of the nature of Iron Age II settlements in southern Jordan as a springboard for reassessing traditional models of social, economic, and political structures of late Iron Age society in the region. By combining a macro-scale (regional) and micro-scale (site-by-site) approach to allow a detailed contextual analysis of the dynamics of individual sites and their local environs to be undertaken, it will be possible to develop alternative ways of understanding Iron Age southern Jordan.

With these aims in mind, the 2006 season was devoted to the excavation of three trenches at Khirbat ad-Dabba, surface survey of sites and field systems in the surrounding area, detailed mapping of the all archaeological features in the project area including water management structures, field boundaries, sites and tumulus tombs using GIS, and

Fig.1 : View of Khirbat ad-Dabba, facing East

Fig.2 : Overview of Trench A4, facing South West

Fig.3 : Overview of Trench B2, facing North West

deterioration has happened in some areas, particularly in the southern aisle, large parts of this pavement are in a good state of preservation and call for immediate restoration. The few pottery sherds associated with this pavement indicate a date within the eighth\ninth century AD. Also, the pattern executed shows a great affinity to those known at Khirbat al-Mafjar on the Palestinian side of the Jordan valley.

In some scattered notes left by the late Atyat he argued that the Shuqayra mosaic-paved structure is an ecclesiastical building. One of the goals of the 2006 excavation was to investigate the function of this building. The mosaic pavement has not been entirely uncovered; however, there are some observations that may make the church explanation questionable; 1) the dimension of the three aisles is asymmetric, 2) the central medallion faces southwards instead of east west (on the same axes with the whole structure); 3) no evidence for an apse was found and a probe trench opened in the area where an apse might have existed produced no architectural remains whatsoever and 4) no finds that can be attributed to ceremonial activities held at churches were found in the course of five seasons of excavation. Establishing the purpose of this compartment and its spatial and temporal relationship with other buildings at Shuqayra will be on the agenda of any future field work.

Phase III Middle-to-Late Islamic: Ayyubid-Mamluk through Ottoman Period

This phase is represented by clumsy walls built to modify buildings constructed during the former phase. Some of the chambers discovered in Area A seem to have been converted to barnyards (stables) as indicated by stone bins containing earth fill that has a high percentage of charred chaff. The mosaic structure also witnessed fundamental modification as walls made up of semi-dressed to rough medium-sized stones were built directly upon the mosaic floor. Through time a carbonated thin layer of detritus formed between the walls and the mosaic surface.

Phase IV Modern; twentieth century

People of the modern village of Shuqayra had been living in shack-like simple houses upon the ancient remains in the site until the 1960s; before they moved to the modern village. Their presence is representing by the truncated walls of small rooms associated with cement pavements which are covering a great part of the site.

In conclusion, the main phase of settlement at Shquayra West was during the Umayyad and Abbasid periods. The structural evidence unearthed so far (i.e., hemispherical towers, and variability of rooms) as well as the aesthetic patterns executed in the mosaic pavement shows strong affinities with the architecture of Early Islamic monuments dotting the steppe-like landscape around Amman and to a lesser degree the Jordan River valley. Excavation at Shuqayra is still at an initial phase. Further field work is needed to establish the accurate function of this palatial building as well as its importance during the various Islamic stages.

Mosaic : depection of a vase

Capetal

Mosaic : depection of a basket

Shuqayra West

Project Name: Mu'tah University Excavations at Shuqayra West
Duration: July 2-August 16 2006
Number of workmen: 10
Cost of project: 2000 JD.
Sponsor: Mu'tah University
Directors: Khalaf F. Tarawnih and Younis M. Shdaifat
Representative: Jihad Darwish.

Shuqayra West (Shuqayra al-Gharbiyya) is located on a protrusion of the northern bank of the Wadi al-Hasa (PGC 224.600 E, 043.500 N), at an elevation of ca.1122 m above sea level and is nearly 25 minutes driving from Karak.
It was clear, as could be seen from the above surface wall lines, that the remains belong to a compact architectural unit. Excavations concentrated on two segments; in the central part of the site (Areas A and D) and the southern extension (Area C). Four main architectural phases were isolated in the excavated areas.


General view of the site

Phase I Nabataean

Shallow and restricted to some pits associated with a few potsherds uncovered under the floor of one of the chambers dating from the Early Islamic Period. Bedrock was reached at a depth of roughly 20 cm, probably an indication that the Nabataean presence here is transient.
Phase II Early Islamic; the Umayyad\Abbasid Period.
This is the main phase at the site. In the central portion of the site (Area A and Area D) parts of a large building (assigned Building A) have been uncovered. This building consists of a system of interconnected rooms built on both sides of what appears to be a benched vestibule preceded by an anti-vestibule that is accessed by a protruding entrance delineated by two hemispherical towers. These installations are restricted by a wall unearthed in Area D that runs in an approximately east-west direction. Along this wall is a group of arch springers, probably indicating that there was a vaulted passageway. West of the rooms and behind the vestibule is an open area with a floor paved with cracked, yet nicely aligned flagstones. The ceramic evidence associating these buildings, includes an ostracum bearing Kufic Calligraphy, and a rusted fills indicate an eighth\ninth century date for this part of the site.
An incredible discovery however was made in Area C, overlooking Wadi al- Hasa. Here, a mosaic-paved rectangular (22 m long exposed length) compartment was initially discovered during the 2002-2004 excavation at the site. The 2006 excavation extended to the southern part of this compartment. The pavement is divided into three sections by means of two rows of columns. The northern section is 1.12 m broad; the central section is 3.20 m, while the southern aisle is 5 meters wide. The mosaic, which depicts only geometric and floral decorations but no anthropomorphic and\or zoomorphic patterns, is the first of to be uncovered on the Karak plateau. Despite the fact that


Overview of Building A discovered in Areas A and D (mosaic floor)


Mosaic : gematric pattern

Site-protection and presentation

A careful cleaning of exposed structures, especially the Roman 'apse monument', has already been done and first-aid measures were taken in order to protect them from decay. The advice of Jean Brunet, expert in stone carving, IFPO Amman, was of great help. Our architects and all our team are considering long-term solutions, and how to improve public presentation of the area, in close co-operation with the Department of Antiquities.

Exhibition of the bust of Marcus Aurelius in Paris

Following an agreement between the Department of Antiquities and the Louvre Museum in Paris, and thanks to the help of the Cultural Service of the French Embassy in Jordan, and of IFPO Amman, the oversize marble portrait of Emperor Marcus Aurelius found in April 2004 near the 'apse monument' was taken to Paris in January 2007. After cleaning and restoration in the workrooms of the Louvre, it was exhibited from February 7 to June 18, 2007, in the Department of Near Eastern Antiquities of the Louvre. It has now been returned to the Amman Museum. An Arabic translation of the leaflet published in Paris is being prepared.

Publication and research previsions

As mentioned, we are currently preparing a provisional article and a more elaborate publication of the main structures and artefacts of the western part of the sacred area. A geomorphological survey should give a more precise knowledge of the natural features. In the next season, scheduled from October 15 to November 15, 2007, we intend to go on investigating the northern limit of the temenos and the western building behind the 'apse monument'. In the future, we would like to focus on a large-scale investigation of the extensive 'Nabataean' building, east of the Qasr al-Bint temple, as a second phase of our research programme on the sacred area of this major urban sanctuary.

Fig.3 : Amphoras in the western building, room P9

Fig.4 : The terrace and retaining wall (E4), to the north-east of the altar

2) On the west of the temenos limit (area C4).

After a previous deep sounding at the rear of the 'apse monument', excavation was substantially extended westwards from 2005 on. This revealed a succession of built structures belonging to the Roman and Nabataean periods:

— A large building (Fig. 2), perhaps related to the first Nabataean wall built at the western limit of the 'temenos' in the same axis as the Qasr. This building was destroyed in the early 2nd century AD and then re-occupied in Roman and Late Roman times.

— Deep soundings in some rooms of this building reached ancient levels containing a homogeneous assemblage of artefacts of Hellenistic times (coins, sherds including black glazed Attic pottery, one lamp), associated with walls or foundations built on an oblique axis and lying on a levelled ground. They are obviously connected to the similar oblique walls found in 2005 on the eastern side of the 'apse monument'. The overall disposition of those early buildings and their function (which could be cultual rather than domestic) are still to be determined. This discovery may shed new light on early settlements in the very centre of Petra.

Three rooms in this complex were excavated in detail. In one room (P12), which was probably an open space, a deep sounding reached bedrock, and showed evidence of successive occupations from Hellenistic to Late Roman times (2nd century BC - 5th century AD). It revealed a succession of channels, then of refuse. These can be related to the re-use of the building in the early Roman period. In the last phase, a drainage channel was set on the refuse levels.

Another room (P11), corresponding to the installation of a flight of stairs in the Nabataean complex, was subsequently modified and a large tabun was established. It was found in its state of abandonment (early 2nd century AD), and yielded a great quantity of cooking pots.

In the last investigated room (P9), the excavation of a bench in the southwest corner of the room yielded a set of three imported amphoras in a good state of conservation (Fig. 3).

3) North and north-east of the main altar (area E4)

In order to obtain more precise information on the northern limit of the 'temenos', a trench was dug in 2005, a few meters north-east of the main altar, in a disturbed area. It was extended in 2006, both eastward and westward, in connection with a former sounding (Fig. 4).

Under the disturbed surface levels, we cleared the huge retaining wall running east-west along the northen limit of the paved area. It is linked to a wall and other structures built on the northern side of the altar in order to protect the paved terrace from the floods of the wadi.

This terrace wall still sustains the edge of the pavement: remains of which were found in situ.

In spite of disturbance, a large amount of information was gained on the organization of the northern limit of the 'temenos'.

Due to its location close to the visitors' path, and in order to prevent the structures from decay, this trench was backfilled at the end of fieldwork.

Thus, new evidence appeared on the chronology of the western part of the sanctuary. Hypotheses are under discussion regarding the former stages of the whole area, on the first buildings, on the architectural programme including the Qasr al-Bint, then on the Roman imperial monuments, their destruction and their brief reuse in Late Roman times.

The "Nabataean building" (area B)

No extensive excavation was done in the "Nabataean building" located east of the Qasr al-Bint, except the excavation of a deep well in the northern aisle of the building. Excavation reached a depth of 11 m, and could not be entirely completed. It yielded a great amount of varied material dating up to the Ayyubid and Mamluk periods.

Artefact drawing and studies, analyses, anthropological study

The team continued cleaning, restoring and drawing newly discovered pottery, lamps and figurines, as well as metallic and bone artefacts. Samples were selected for physical and chemical analyses, especially from mortars from the 'apse monument' and organic remains from pot sherds and lamps, to be analyzed by Dr Nicolas Garnier. Nathalie Delhopital (IFPO Amman), studied the human bone remains found in the first seasons of excavation in burials dating back to the Late Roman/Byzantine and mostly Medieval periods.

Petra - Qasr al-Bint

Project Name: the French Archaeological Mission at Petra in the Qasr al-Bint Area, ninth season. This mission is a part of the project 'From Petra to wadi Rum: Nabataeans and Arabs in South Jordan'.
Duration: October 30 - November 27, 2006 (29 days).
Number of workmen: up to 28.
Cost of Project: total approx. 16500 € = 15000 JD.
Sponsors: the French Ministry of Foreign Affairs, with contributions of the French National Research Centre (CNRS), the University of Paris I, INRAP, IFPO, the French Embassy in Jordan and some private donators.
Directors: Christian Augé (CNRS-IFPO) and François Renel (National Institute for Research in Preventive Archaeology - INRAP, Associate Researcher to the CNRS).
Representatives: Mr Talal al-Amareen , Mrs Samia Falahat

General organization

The ninth season of the French Archaeological Mission at Petra-Qasr al-Bint was carried out from October 30 until November 27, 2006. As before, the excavation falls within a research programme started in 1999 devoted to the archaeological and architectural study of the sacred area in the Qasr al-Bint sanctuary and related buildings.

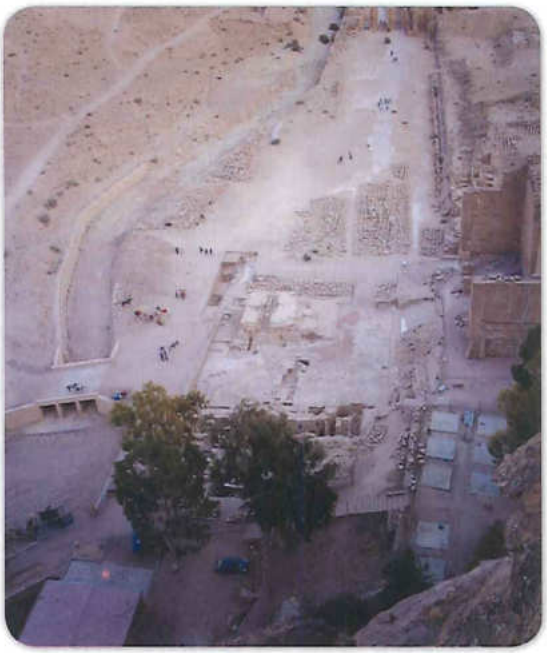


Fig.1 : General view of the excavated area from the west

The 2006 field-programme and main results

The 2006 programme concentrated on an area north and northwest of the Qasr al-Bint (chiefly areas C and E). We intend to finish a provisional publication of our results on the western part of the sacred space - a more elaborate publication will follow, including the artefacts. The main subject of our paper is the study of the imperial apse monument ('exedra'), but it also concerns the altar, the attached structures and the paved area. Previous seasons work was completed and two important areas were excavated. Some excavation and cleaning was also performed on the 'Nabataean building', east of the Qasr, and on the water system of the whole area (Fig. 1).

1) The imperial 'apse monument' ('exedra').

Our architects made additional drawings and studies of the monument: graphic reconstructions can now be proposed for the whole structure. Hypotheses are currently under discussion regarding the successive stages of the building programme during the first decades of the Roman period in the 2nd century AD, and on the elevation of this impressive façade. Perhaps first intended as a 'Nymphaeum' or monumental fountain, it was finally constructed to honour Roman emperors whose oversize marble statues were displayed in the central apse, set in a rich decorative environment carved in sandstone, under the protection of busts of gods and goddesses. Furthermore, additional observations could be made on various architectural features of the Qasr al-Bint itself and on its decoration.

Fig.2 : The western building (C4), overall view

Dana to Ash-Shawbak

Project Name: The Lowlands to Highlands Edom (L2HE) Archaeological Project: An Iron Age Site-Catchment Survey from Dana to Ash-Shawbak
Duration: May 28, 2006 to June 8, 2006
Number of Workmen: 15
Cost of Project: 1000JD
Sponsor: University of California, San Diego
NSF Doctoral Dissertation Research Improvement Grant
Director: Dr. Thomas E. Levy (UCSD) ,Co-principal Investigator: Neil G. Smith (UCSD)
Representative : Tahani al-Salhi

The Lowlands to Highlands' (L2HE) Edom archaeological survey and soundings is a two year project that is currently investigating how the manipulation of social boundaries, trade and copper metallurgy contributed to secondary state formation in the southern Levant – specifically in ancient Edom (southern Jordan) during the Iron Age II period (ca. 1200-500 BCE). The first stage of the L2HE Project was to conduct a site-catchment survey of the region where significant sites were selected for excavation. This stage was carried out during a two week period from May 28-June 8, 2006.

Site 3 Kh. Umm-Luza

Site 8 Kh. Shubayka

The reconnaissance survey revisited key Iron Age highland sites from Dana and Ash-Shawbak originally identified by the Dana Archaeological survey (DAS) and other projects. Specific new data was collected from these sites to establish comparable datasets with the JHF lowlands project. As this was a highly focused survey aimed at identifying sites suitable for archaeological soundings, regional random sample survey was unnecessary.

The survey located 44 sites within the site-catchment areas. A total of 17 sites discovered within the site-catchment areas contained Iron Age ceramics as a dominant or as a component part of the overall collection. Nine sites yielded a high concentration of Iron Age pottery with little representation from other periods (20, 24, 26, 30, 32, 33, 35, 45, 46). These sites met the survey's primary goal of identifying key Iron Age dominant sites for further sounding.

Preliminary results suggest that the settlement pattern data for Shawbak and Dana reflects small pockets of Iron Age occupation primarily along routes that would have been used for trade. Shawbak's potential for agricultural exploitation was not fully realized until the Roman and later periods. The evidence of small fortified settlements along these possible trade routes perhaps highlights the trade's importance but does not at the present suggest state level control. The absence of any village of significant size with satellite sites suggests that the inhabitants continued to live fairly autonomously.

Overall, the survey met its goals of identifying key Iron Age sites for further soundings in the Dana to Shawbak region. It became apparent during survey that many plateau areas contained in between Wadi Dana and Wadi Ghuwayr were inaccessible by vehicle and could only be reached by extensive hiking. Previous survey data was never conducted in these areas and so was not a main focus of the ten day catchment survey. However, as these areas are primary routes leading up from Wadi Fidan, even a preliminary survey of Iron Age sites in this area would be very practical to our understanding of how trade routes were utilized and controlled.

Jabal Numayr/ Petra.
Project Name: Obodas Chapel Project.
Duration : 5 weeks (June 17th – July 20th 2006)
Number of workmen: 9.
Cost of project: 3200 JD.
Sponsor: French National Scientific Research Center (CNRS).
Director : Laurent Tholbecq (Université Laval, Québec).
Representative: Mohammad Salameen.

The 2006 season focused on the following areas:

- The rock-cut chamber Dalman Inv. # 1296 (square 11000).
- The blocked rock-cut chamber discovered in 2004 on the Eastern side of the esplanade (square 12000).
- The Southern entrance of the complex (square 13000).
- The area situated on the north-east of the rock-cut chamber Dalman Inv. # 1296 and of the cistern Dalman Inv. # 1297 (square 14000).
- The stibadium connected to the niches Brünnow and Domaszewski Inv. # 289 (square 15000).
- The biclinium Nehmé Inv. # N19 (square 16000).

Obodas, U-shaped Triclinium ,view to the east

The objectives as follows:

- To complete the 1:20 scale top-plan of the religious complex.
- To record the plans, elevations and sections of all the rock-cut chambers of the complex.
- To study the architectural fragments.
- To understand the layout of the southern entrance of the complex.
- To study two of the unexcavated rock-cut chambers.
- To study the ceramic material from the previous seasons.

All these objectives have been reached. A further season is planned, with the aim of excavating the 1st century BC religious complex mentioned in the 20 AD dedication of the Obodas chapel.

ROMAN COOKING-POT

NABATAEAN PLATE

Roman cooking-pot (c.300-350 AD), were laid around the piles of bones on the bedrock. Those bones were possibly pushed away in the north-west corner during a cleaning phase, however previously, bodies had been directly buried on the floor's chamber or in wooden coffins. Considering that the pit in the north-east corner was the only pit-tomb in the chamber and that these kind of burial installations are usually not contemporary with an early occupation of the shaft-tombs, we suggest that the bones were pushed to the opposite corner of the pit when the latter was dug. The funerary chamber would then have known at least two phases of occupation: the first, with burials on the floor's chamber or in wooden coffins and a second phase, with an individual tomb dug in the north-east corner and the bones of phase one stacked up in the north-west corner.

We stress that bones of phase one were not thrown out of the tomb during phase two; instead they were kept inside the tomb. Moreover, it appears that three complete pots were laid as a deposit on the bedrock's surface close to bone piles. Since a Roman cooking-pot, estimated from 300 to 350AD, is the most recent pot, we suggest that the second phase occurred between the end of the 3rd c. and the middle of 4th c. AD. Afterwards, the tomb may have been abandoned.

Perspectives

Recovered from the same black layer under piles of bones, beads made of stone or glass will be analyzed by a geophysical student from Bordeaux University in France, under the supervision of Professor Rémy Chapoulie. Fragments of copper bells discovered in the same layer will be analyzed in the same laboratory in Bordeaux.

We kept a baulk alongside the south wall's chamber to be able to check the stratigraphy and also to give a sedimentologist or a micro-geomorphologist the possibility to study the way the chamber was filled in with sand.

Through sifting the earth from the ancient layer of the floor chamber's surface, we found a few seeds. These were given to Professor Margareta Tengberg (University of Paris-Sorbonne), as well as soil samples. Ash samples were found in a Nabataean plate laid on the bedrock and they will be given to chemist Nicolas Garnier – LNG Vic laboratory (France).

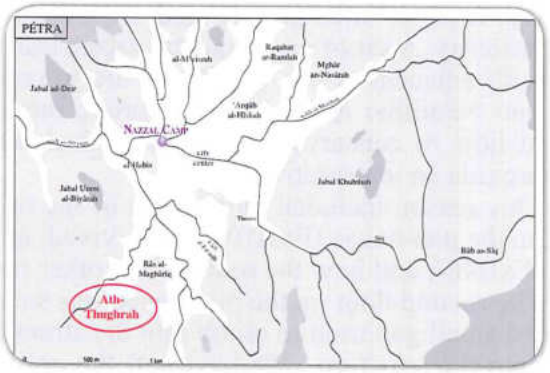
Conclusion

The only indicators for early activity in the tomb i.e from the second half of the 2nd c. BC until the first half of 1st c. BC are two sherds of a Hellenistic unguentarium and a few sherds of Nabataean painted fineware pottery from Schmid phase one. Before the second half of the 1st c. BC, clues for activity in the funerary chamber are tenuous and we will have to check them more closely through the ceramic study. The chamber might have been cut before that time, but it would then have been entirely emptied and cleaned before its main period of use i.e from the 1st c. BC to 4th c. AD. We doubt that such a thorough cleaning is possible and that no single sherd would have been let behind. Therefore, we propose to date the cut of the tomb from the oldest artefacts found inside - from the middle of the 2nd c. BC - for the earliest proposal - or the middle of 1st c. BC - for the latest one. The tomb may have been abandoned during the 4th c.AD, most certainly after the major earthquake that occurred in the middle of the century and destroyed half of the city of Petra.

Ath-Thughra necropolis / Petra

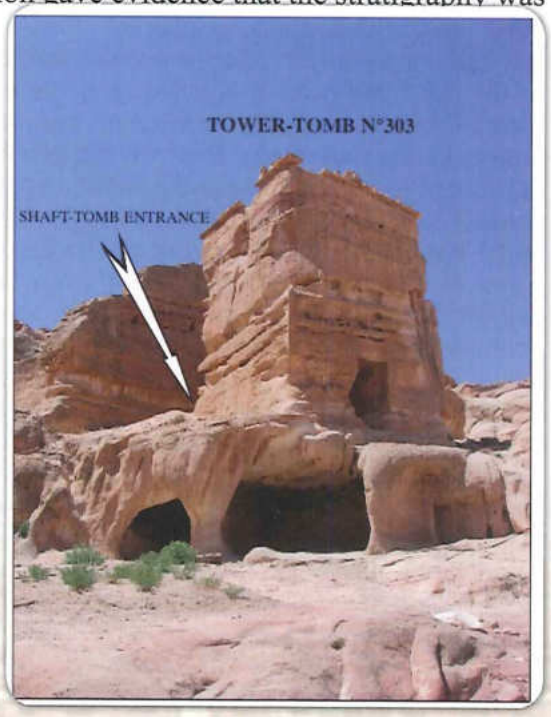
Project Name: FAUPP – Funerary Areas understanding Petra's Project - French archaeological Mission in Petra's Necropolis
Duration: 29th November-20th December 2006
Number Workmen: 10
Cost of Project: 3750 □= 3000 JD
Sponsors: French Ministry of Foreign Affairs, French National Research Center (CNRS), French Near Eastern Research Institute (IFPO)
Directors: Christian Augé and Isabelle Sachet
Representative: Ahmad al-Shami

The French archaeological mission in Petra's Necropolis – FAUPP, Funerary Areas understanding Petra's Project - is part of the main project "From Petra to Wadi Ramm : Nabataeans and Arabs in South Jordan".



Preliminary results

In May 2006, Michel Mouton (CNRS, France) discovered the shaft entrance of a c.6m sq. funerary chamber at the bottom of the tower-tomb n 303 in ath-Thughra area. It was urgent to excavate as soon as possible to avoid loss of information from possible deterioration of the tomb. Therefore, we excavated for one month during the winter in 2006. The many sections we obtained from the excavation gave evidence that the stratigraphy was homogeneous. Apart from modern looting restricted to the north-east corner of the chamber, a regular and uninterrupted filling of successive thin layers of sand appeared in the tomb from the bedrock to the modern level. The tomb was abandoned a long time ago and little by little filled with sand.



A small medieval occupation was noted in the north-west part of the chamber. Medieval sherds, charcoal and an Islamic lamp were found in the filling ca. 1.20m above the chamber's floor. The tomb may possibly have been used as a temporary refuge or hiding-place for a small number of people. The tomb was not cleaned at that time therefore the level of sediment remained intact.

Elsewhere in the chamber, no sign of human activity was identified from the modern level of the chamber to the floor's level. The floor's surface of the tomb has been preserved since ancient times. Bones there had been stockpiled in the north-west corner of the chamber. No connecting bones were found and the number of individuals in the shaft-tomb is currently estimated at around 30-50 by the anthropologist, Nathalie Delhopital. Three complete pots, manufactured in Petra, two unpainted nabataean plates (c. 150 BC-200 AD) and a

Bayda

Project Name: Bayda project
Duration: March 28 – April 10, 2006
Number of workmen: 1
Cost of project: JD660
Sponsor:University of Reading, Council for Britihs Research in the Levant, Leverhulme Trust
Directors: Prof Bill Finlayson, Dr Mohammad Najjar, Miss Samantha Dennis

The Bayda project is a joint project between the Department of Antiquities and the Council for British Research in the Levant. Bayda is an extremely important site in the study of the transition from nomadic hunter gatherers to sedentary farmers, and subsequent architectural and cultural changes. The site was excavated in the 1960s and 1980s by a British team led by Diana Kirkbride but at that time no attempt was made to conserve the site for posterity. A set of experimental reconstructions has been built adjacent to the site. These are to conduct research into Neolithic architecture; improve our understanding of how to conserve the archaeological remains; and to provide an interpretive centre.

This season included monitoring of the ongoing experiments, in particular how well the second floor on the pier house (ExB10) had survived; how the exposed interior of the burnt building was weathering (ExB48); and how the roofs of the other two circular structures (ExB18 and 49) were faring.

The second floor on the pier house was surviving well, except for one area of stone collapse adjacent to the small gap used to climb into the structure. This may have been knocked down by people climbing onto the structure. We have left the collapse in place to enable monitoring of any further damage. The burnt building had remained largely as before, although the timbers we placed to block its entrance have been taken away. The flat roof on the adjacent circular building (ExB18), repaired in 2005, was still in good condition.

We had constructed a steeply pitched roof on the first structure we had built (ExB49). No maintenance of this roof had been conducted over the years so that we could observe the process of decay. While most of the wooden frame was intact, the reed part of the roof was in poor condition and almost all of the mud covering had gone. This was the first roof to be built and had been designed to help understand the purpose of the central post and its relationship to the ring of posts and annular stone walls. Our subsequent research and increasing expertise suggested that a shallower pitch would survive better and be easier to build. Part of this season's work was to dismantle the remains of the old roof after recording and to build a new one. As in the archaeological examples some of the vertical timbers were replaced, one where rot had set in and the post had deteriorated, others where it was felt that a lower pitched roof would require stronger uprights than had sufficed for the first roof. The new roof was completed, although we intend to add additional layers of mud and stones to the roof in our autumn season.

An additional set of experiments was conducted in an attempt by Chloe Brown (of Reading University) to make lime according to traditional methods. Limestone was collected from the outcrops beside Dibida spring and was burnt in a series of different fires. Two were placed in pits, one of which was covered with soil once the fire was going, and one was burnt on the surface. The required temperatures were reached in all fires and small quantities of stone were calcified, although the supply of fuel limited the degree of calcification. Lime was produced from these calcified stones and some small areas inside the pier building were plastered. (Further ethnographic work was subsequently conducted with people in North Jordan who had made lime the traditional way and could still recall how it was done.)

New temporary information panels were placed inside the central round building. We are considering placing the long-term information panels inside experimental building ExB49, where they may be better sheltered from the weather.

structures and ashlars of the cairns carry decorations like ibexes and unknown sign. Another striking feature are the "well houses" of Qulban Bani Murra in the bed of Wadi as-Sahab al-Abiad. They are characterized by central sand-filled depressions of some 6 m in diameter to which a kind of corridor leads. Up to 24 curvilinear and oval rooms were found around these depressions, resting with their single row walls on an elevation created by the rubble of digging into the wadi floor. It is expected that the depressions represent wells, and that the rooms and associated stone piles belong to domestic structures. In these mid- Holocene times, most of the desert areas of the Arabian Peninsula were covered by seasonal lakes and vast pastures, bringing life to dry and remote areas like Qulban Bani Murra. The survey of 2001 showed that this area 130 km east of al-Jafr was densely populated by pastoral groups during the late Chalcolithic and Early Bronze Age periods, representing the most prominent (even dramatic) peak in its occupational history: the well houses demand excavation since they could be earlier than the first oases cultures of the Arabian Peninsula, and may witness an earlier water management by herdsman. At the same time as the ceremonial and burial center of Qulban Beni Murra was revisited by pastoral groups, the first states flourished in the agricultural zones of the southern Levant. It is to be expected that parallel to these an unknown and complex desert culture existed, which was not using pottery and had funeral centres. It is a project hypothesis that these desert societies helped make long distance contacts between the proto-urban and early urban spheres in Mesopotamia and Egypt.

Qulban Bani Murra, Area C: (looted and destroyed) chamber grave with standing stones in the E. (photo courtesy of the Eastern Jafr Project)

Qulban Bani Murra, Area C (Area B: horizon): part of cemetery with line of (looted) chamber graves. (photo courtesy of the Eastern Jafr Project)

is the area between the "sown" and the "desert" and is at the western extremity of the Central Jordan Pediplain or Central Desert Area of Jordan. The climate in this zone, as in Zone 1, is arid and the vegetation is Irano-Turanian.

During the 2005 season of the project, ARNAS team members carried out a comprehensive and systematic examination of the greater part of Zone 2, the area in which the majority of present-day villages and farms are located. In addition, team members examined the Pleistocene lakes in Zone 3 noted, for the most part, on the "Geological Map of Ma`an (3150-III)" and the "Geological Map of Jabal al Batra (Jabal Thallaja) (3149-IV)".

As a result of the 2005-season's work, team members surveyed 209 sites, including eight Pleistocene lakes. Cultural-temporal unites represented at these sites span the Lower Paleolithic to the Late Islamic period. However, some cultural-temporal units are poorly represented or not represented at all among the collected lithics and sherds. Finally, the sites surveyed include a number of types, e.g., agricultural villages/ hamlets, farmsteads, forts, roads, watchtowers, and lithic and sherd scatters.

During the 2006 season, ARNAS team members concentrated their efforts on transecting and recording the archaeological remains found in the randomly-chosen squares of the three topographical zones of the survey territory. As well, team members surveyed the sites encountered within, adjacent to, or on our way to them.

The investigation of the random squares (500 x 500 m) of the survey territory, which cover about 5 percent of each of the three topographical zones, has a threefold purpose. Firstly, the units provide a baseline against which pottery collected from archaeological sites in the region can be compared. Secondly, these units force the research into all areas of the project region. And, thirdly, recording random squares has proven to be an effective means of discovering new sites, both within and adjacent to the squares. In essence, the recording of random squares provides access to a statistically valid sample of archaeological sites and ceramics.

The stratified random sample units for the ARNAS project are based on the Map Series K737, Sheets 3049 I, 3050 II, 3149 IV, and 3150 III; created in Arc/INFO GIS software; projection and coordinate system UTM Zone 36N; and European Datum 1950.

The 2006 season's work resulted in the transecting and recording of the archaeological remains in 82 of the

Site 311, Kh.Umm Qasir

Site 277, Kh. 'Aliya / farm

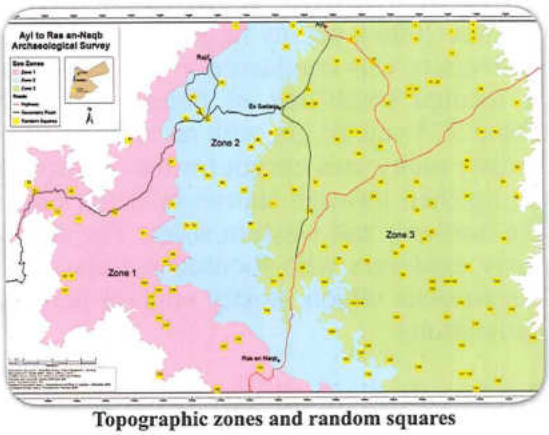
Ayl to Ras an-Naqab

Project Name: The Ayl to Ras an-Naqab Archaeological Survey, Southern Jordan
Duration: 2005 Season: April 27-June 12
2006 Season: May 10-June 20
Number of Workmen: each Season 6
Cost of Project: around JD 10,000 per season
Sponsor: The Social Sciences and Humanities Research Council of Canada and St. Francis Xavier University, Antigonish, Nova Scotia, Canada
Director: Burton MacDonald
Representatives: A. Rawshdeh (2005 season)
A. Bdour (2006 season)

The main objective of the work is to discover, record, and interpret archaeological sites within the Ayl to Ras an-Naqab region, an area comprising approximately 860 square kilometres. Other objectives include a study of the settlement patterns of the area from the Lower Paleolithic (ca. 1.4mya) to the end of the Late Islamic period (1918 AD); to examine the Pleistocene lakes in the area; and to investigate further the Khatt Shabib or "Shabib's Wall", which cuts through the territory in a north-south direction.

The territory of the survey is part of the southern segment of the Transjordanian Plateau. It is ca. 26 (N-S) x 39 (E-W) – at its widest - kilometres. The western extremity of the territory is the 1100 m line while the eastern extremity extends to the 1200 m line towards the city of Ma`an (Figure).

The ARNAS survey territory consists of three topographical zones. Zone 1 is the western segment of the territory. It lies in an area where elevations range from 1100 m on the west to 1500 m on the east. It is the western extremity of the Highlands east of the Rift Valley, i.e., the Wadi `Araba-Dead Sea-Jordan Depression. West and southwesterly flowing wadis cut deeply into the terrain. The vegetation in this zone is Mediterranean and the present-day climate is arid with annual precipitation as low as 50 millimetres. Zone 2 is the central segment of the territory, i.e., the mountainous region where elevations range from just over 1700 m in the north to 1500 m in the south around Ras an-Naqab. This geographical zone is frequently referred to as the Mountain Ridge and Northern Highlands east of the Rift Valley. Both its western and eastern extremities are the 1500 m line. The main north-south highway and the watershed are located in this zone. Wadis flow from it to both the west and southwest on the one hand and to the east and southeast on the other, i.e., into Zone 1 and 3 respectively. Here, Mediterranean climate dominates and annual precipitation is around 300 millimetres. Zone 3 is the area from the 1500 m line on the west to the 1200 m line, i.e., towards the city of Ma`an, on the east. It



Topographic zones and random squares


site 322, farm


site 229, Hamlet

Petra / Al-Madras

Project Name: al-Madras Geophysical and Archaeological Survey
Duration: 15th June -25th June 2006
Number of workmen: 5
Cost of Project: JD 500
Sponsor: al-Hussein Bin Talal University
Directors: Dr Zeyad al-Salameen and Dr Mohammad al-Farajat
Representative: Haroun al-Amarat

In June 2006 a survey financed by al-Hussein Bin Talal University was conducted in the Al-Madras area which is located south-east of Petra. It covers an area of about 275 square km with an altitude of 1036 m. It is a mostly rocky area except for the northern part and could be reached through stairways hewn out of the rock in the northern and western sides. The site was visited by early explorers who focused mainly on the Nabataean inscriptions which mostly contain personal names and dedications.

Fig.1 : Locations of some of the ancient dams

Archaeological survey

Unique Nabataean hydrological installations and channel systems have been recorded in addition to rock-cut chambers and caves including a triclinium. Additionally, dozens of cult niches of different types have been recorded and they all confirm the religious nature of the whole site.

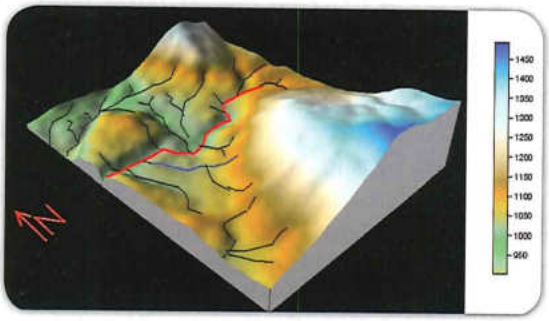


Fig.2 : Overlaid drainage system of Wadi al-Madras (red line) on a DEM of the area

The Geophysical survey results

Wadi Al-Madras extends south east – north west, where it meets the narrow path of Al-Siq which leads to the ancient city of Petra. The Wadi drains its water in winter into Al-Siq, contributing to an increased risk of flood. More than 20 ancient small scale dams intercepting the Wadi were found (fig. 1). The nature of the Wadi, and the high slope angle of the area emphasize that these structures were installed by the Nabataeans to reduce flood risk in the old city of Petra, and also to serve in their small scale water management plans. Hydrological modeling using digital elevation models, and space photos of the area allowed more understanding of the Wadi's system (fig. 2). Geomagnetic survey discovered some other buried dams.

These dams belong to the "Detention Dams Type" which are designed mainly to moderate peak floodwater flow rates during high intensity flash floods by collecting the water in a contained area and releasing it at a controlled flow.

The dams were investigated, and revealed dimensions of lengths of 30 m, and widths of about 3 m. Local blocks of limestone were used to build the dams. Heights were measured as more than 3 m.

As result of recent geophysical works conducted by the authors, a great deal more is understood about the hydrology of the area especially the dams at the western and northern parts of the site which were constructed mainly to control the runoff water flowing down towards the city and to prevent the flood risks to protect the city. Similar dams were constructed at the inlets of all main tributaries in Petra.

were also uncovered indicated by a concentration of Jericho IX pottery sherds identified in the uppermost Layer I of the site in association with multiple stone platform features. Five of these platforms are constructed out of small, flat stones ~ 10 x 10 cm and are similar in spread (~40 x 40cm), but variable in shape. These platforms, combined with their location on the edge of a rough huwwar-type floor suggests that they were foundations for tent poles. Multiple hearth and platform features were installed into the rough floor area, suggesting domestic use of this space.

The Late PPNB architecture identified during the 2006 season is truly massive in scale and is characterized by 2-3m in height walls and plastered floors and walls. A major Late PPNB wall was identified in Space 13 of the site that leads into other areas of the site. Two remarkable massive doorways are located on the east and west end of the space. One door is defined by a massive door lintel measuring 1.6m long, 0.7m wide, and 0.25m thick. The immense size and weight (c. 800 kg) of the lintel suggests that it would have taken considerable effort to not only situate the lintel on top of the walls, but to transport it to the site. The lintel, walls, and flagstone flooring of this room together form an incredibly large doorway that is over 2m in height and 80cm wide that provides easy passage into Space 14/15. The second passageway is situated in the southwestern end of Space 13 and is as almost as large as the first door encountered. This doorway is located roughly 1m from the top of W. 403 and is 1.4m tall and 60cm wide. Just before entering the doorway to pass into another room, there is a step leading down

Another Late PPNB plaster bin contained some of the most exciting and intriguing finds of the 2006 excavation season. Lying immediately on the bottom of a plastered bin was the unplastered skull of an adult human male. Deposits around the skull consist of a loose matrix mostly wall plaster debris, indicating that the skull originally sat exposed in the bin. This individual exhibits extensive tooth wear, which may indicate this individual died at an advanced age. Placed just north of the skull was a long, bifacially thinned knife. Lying immediately south of the skull and also directly on the surface of the plaster bin was a rich cache of burial goods. The items included were four more bifacially thinned knifes, two large bone needles, a bone spatula, a bone awl, two metapodials that were split in half and subsequently polished, three unmodified medium ungualte metapodials, a large chunk of red ochre (approximately 50 grams), and an anthropomorphic figurine. The items in the cache are stacked on top of each other in a disorganized way but are contained with circular shape, indicating the items may have been placed within a container that have since disintegrated.

A large. ~ 4 x 3m Late PPNB room was also revealed during the 2006 season. An extremely hard white plaster floor was identified in this room. The southwestern portion of this floor is elevated c. 10cm above the rest of the floor to form a raised platform. Access into Space 12 was provided by a set of stairs wedged in between two major walls. The stairs contain four steps covering 90cm in height, and the uppermost step is raised c. 20cm above a series of large flat stones that form a depressed landing for the stairs. These stairs and an associated landing in front of Wall 311 recall a set of stairs recently uncovered at Ba'ja Unlike the stairs at Ba'ja, which are interpreted as leading to a second story but do not lead to any specific features, the stairs at Hamma lead to second-storey plaster bin installation

The 2006 excavations at al-Hamma have revealed important information regarding plant and animal exploitation practices during the Late PPNB, PPNC, and Pottery Neolithic, a unique burial cache, and patterns of architectural modifications applied to internal living spaces and cycles of use and disuse in Late PPNB space.

It is recommended that excavations of this unique site continue, as the site appears to be threatened by the rising waters of the Tannur Dam. The rising water is of particular concern with regard to the PPNA deposits identified at al-Hamma in 2004, which make al-Hamma the only site in the southern Levant besides Jericho that contains such as a long sequence of Pre-Pottery Neolithic cultural material.

Al-Hamma

Project Name: al-Hamma Excavation Project
Duration: 6 weeks
Number of Workmen: 13
Cost of Project: $5000
Sponsor: Harvard University
Director of Project: Cheryl Makarewicz
Representative: Ashraf al-Rawashda

The site of al-Hamma is a multi-period Pre-Pottery Neolithic settlement approximately 2 hectacres in size located in the Wadi al-Hasa immediately south of the Tannur Dam (35° 43' 52" E and 30° 58' 00" N. Al-Hamma was original identified by Dr. Gary Rollefson during surface survey in 1999, and excavations began in 2004 under the direction of Cheryl Makarewicz, Harvard University. The presence of clearly defined Late PPNB and PPNC deposits at al Hamma is rare and offers a unique opportunity to examine the social and economic transformation that occurred at the end of the PPNB. The primary research objective of the al-Hamma Excavation Project focuses on examining the role, if any, that human-induced degradation of the environment contributed to the collapse of Pre-Pottery Neolithic cultural lifeways. Many researchers have suggested that the collapse of the PPNB was triggered by human action upon landscapes, where natural resource exploitation by humans and their animals initiated such a severe process of environmental degradation in a delicate ecotone that recovery, both ecological and cultural, was impossible. Overgrazing caused by sheep and goat herds, expansion of agricultural fields at the expense of natural vegetation, and deforestation caused by the search for wood fuel, have all been suggested as possible sources of environmental degradation contributing to the collapse of the PPNB; it is necessary to test whether or not overgrazing, deforestation, and over-cultivation of soils during the Late PPNB actually occurred. Al-Hamma is serving as a case study which tests, through pollen, phytolith, macro-botanical, faunal, and stable isotope analyses, the role of anthropogenic disturbance of landscapes and/or large-scale climate change in the cultural shift between the Late PPNB and the PPNC.

The 2006 season excavation efforts concentrated on additional horizontal and vertical exposure of both Late PPNB and PPNC deposits. In addition to PPNC and Late PPNB deposits, Pottery Neolithic (PN) remains

al-Hamma : Space 13 , 15 (Late PPNB and PPNC deposits)

al-Hamma : Anthropomorphic figurine from the burial cache

Ard al-Karak

Project Name :Balu` Survey
Duration:Three weeks August 7-28, 2006
Number of Workmen :2
Cost of Project: 2.500,00 JD
Sponsor: Friedensau University, Germany
Director: Prof. Dr. Udo Worschech, Ursula Worschech,
Christian Molke, accompanied occasionally by Satemassadeh
Representative: Arwa Massadeh

The district of the survey in 2006 is the territory in the northwest Ard al-Karak. The project is connected with the ongoing excavation at al-Balu`, ca. 6 km east of the Jabal Shihan. The survey considers all the periods known in the area dating from the Early Bronze Age to the late Mamluke times. The specific historical background of the survey is to deepen the understanding of the Iron Age period which is prevalent in the area (i.e. Balu`, Adir, Sul, Mu`ammariyya, Mudayna N and S, Mudayna Lehun, etc). The objective of the survey in 2006 was the identification of the many towers alongside the Fajj al-Useiker. It is of importance for the Iron Age military, strategic, and even economic aspects to understand the relationship of these towers to the walled and unwalled settlements in the Ard al-Karak. The main objective, however, was to sherd the sites in order to identify the possible Iron Age occupation of these structures. Since there are many details to be examined, even during the surveys, and roadways and water sources are to be identified, the work was only slow and another season is needed to continue the survey before significant results and conclusions can be formulated. However, the director will forward a preliminary article for ADAJ in the fall of 2007.
There photographs, however, only landscapes with no particular contents and expressions. They are not relevant for the description of the activities above.

Ghawr as-Safi

Project name: Ghawr as-Safi Survey and Excavation
Duration: 16/12/06 to 11/1/07
Number of workmen: 14
Cost of Project : 6,000 JDs
Sponsor: Hellenic Society For Near Eastern Studies With Adelaide University
Director(s): Dr Konstantinos D. Politis and Dr Margraet O'Hea
Representative: Mr. Jihad Darwish

Survey and excavations begun by the Hellenic Society for Near Eastern Studies and the Department of Antiquities of Jordan in 2002-2004 in the Ghawr as-Safi, resumed in a new collaboration with the University of Adelaide during December 2006 and January 2007.

Survey

Detailed survey continued in the Ghawr as-Safi region using GIS/GPS with the objective to map unrecorded areas, locate integral features and identify the communication network.

The ancient water canal and dam system at the south side of the mouth of the Wadi al-Hasa was recorded. An unknown Nabataean inscription next to a rock-cut niche was also recorded there. On the north bank of the wadi a hermitage identified during the last century and Middle Bronze Age II tombs were added to the map. Further up the wadi at the intersection of the Wadi Hamarash-Suweif a PPNB site was identified with Basta-type buildings standing over 1.5 metres, flint tools and grind stones.

Immediately north of Wadi al-Hasa lies Wadi Sarmuj, where the ancient road leading up to the Karak plateau was identified and mapped. Although it was originally a stepped Roman Imperial road, three open-air masjid mosques indicated that it was also used during the medieval Islamic periods. Copper mining was also evident.

The smaller Wadi Beeyuth in between wadis Sarmuj and Hasa was also investigated. South of Wadi al-Hasa beyond the Nabataean/Roman fortress of Umm Tawabin, a naqab track was identified at Wadi Abrash with evidence of pack animals still using it. MBII tombs were identified at all these wadis and mapped in.

In the Ghawr as-Safi floor, survey was extended around Khirbat ash-Shaykh 'Isa and Tulaylat Qasr Mousa

Ancient wadi Sarmuj road leading to Zughar

Khirbat ash-Shykh 'Isa

finds and may have been looted or abandoned. On the east side of the street the entrance ramp into the largest Pillared Building was excavated, and multiple building phases were identified. These were likely related to concerns over drainage and water management, and were intended to compensate for rising street levels.

Further exploration at the south end of the mound by Annlee Dolan revealed more rooms and features of the large domestic building first identified in 2004. The plan of this building is quite unlike the pillared buildings discovered to the north, so this area is of particular value to our understanding of settlement planning at Mudayna. Here intact vessels were discovered, as well as large stone objects such as a limestone basin and an enormous saddle quern. These beautiful finds can be seen at the Madaba Museum.

Excavations in the Nabataean villa at the foot of the mound, carried out by Tracy Scott, revealed a beautifully plastered floor in the central courtyard of the structure. Near the building's entrance two large holes were found, which may have once supported architectural features that embellished the entrance vestibule. The domestic nature of this building was further defined this season by the discovery of numerous tools relating to food processing activities. Nearby Dr. Noor Mulder-Hijmans undertook a brief study of the Nabataean reservoir and began excavations along various wall lines extending towards the east.

As part of the Wadi ath-Thamad regional survey this season salvage excavations were initiated at the Roman fortress of Khirbat az-Zona, situated 2.7 km east of Khirbat al-Mudayna. Focusing on the northwestern part of the perimeter wall, Survey Director Jonathan Ferguson unearthed half of a fortified gate complex and one of its flanking towers. Interestingly, this structure made use of a number of older Hellenistic and Nabataean architectural elements. Other discoveries include a Byzantine coin, decorated masonry and a Nabataean inscription.

This season, as in the previous season, Dr. Margaret Judd of the University of Pittsburgh headed a specialized burial excavation team and undertook excavations in two cemeteries, one located south of the mound and the other northwest of the mound. In these areas primary and secondary burials were identified, ranging in date from the Nabataean period to later times. This team also assisted in excavations in the Nabataean villa, where a primary burial was discovered during the course of excavations.

Khirbat al-Mudayna

Project Name : Wadi ath-Thamad Project
Duration : 2-12/6-21/7/2006
Number of workmen : 48 scholars, students and volunteers
Cost of project :9675 JD
Sponsors: Wilfrid Laurier University
Directors : Dr. P. M. Michèle Daviau
Representative : Husam Hizajeen and Zuhair Zubi

The 9th season of the Canadian Wadi ath-Thamad Project was a great success in terms of new discoveries and realized excavation goals. Leading a team of 48 scholars, students and volunteers from Canada, the United States, Austria, Jordan, Denmark and the Netherlands, Dr. P. M. Michèle Daviau directed excavations in five areas of the main Iron Age mound of Khirbat al-Mudayna and four areas in its vicinity.
Dr. Robert Chadwick continued his exploration of the complex stratigraphic history of the northern end of the ancient mound; where in past seasons earlier storage silos were identified in the vicinity of the later six-chambered gate and fortification system. Further study of the massive retaining wall system north of these features revealed that a significant investment of labour went into the construction of the early agricultural phase of the settlement, as several tiers of support and buttressing walls were identified. Interestingly, some of these walls were used as foundations for the northern boundary wall of the plaza in front of the later Iron II gate.
Further south, Dr. Michael Weigl continued his excavations along the eastern edge of the settlement, and a third Pillared Building was discovered this season. This structure was very well preserved, and finds from within included a large saddle quern, an ash-stained limestone incense altar and a large subterranean cellar. To the north an investigation of unfinished parts of the second Pillared Building revealed massive grinding tools and a complex sequence of building and use phases.
A new excavation area was opened just west of these Pillared Buildings, under the supervision of Christopher Gohm, where last season the principal north-south street of the settlement was identified. Work here focused on refining our understanding of the stratigraphic sequence of the street system and linking the various phases with those previously identified south of the gate. On the west side of the street part of a new building with relatively massive walls was excavated, which contained few

Industrial Building 205

Oven and grinding area in building 400

The Gate of the Castellum af az-zona

Mashaleh (University of Jordan), Square Supervisor; Tanya Treptow, who helped with rewriting and setting tourist pathway signs and preparing a brochure for tourist guides; and Bassem Al-Abadi (Department of Antiquities of Jordan), Department of Antiquities Representative.

The Department of Antiquities of Jordan supplied necessary equipment, tools and building materials. The Municipality of Hisban supplied the bulldozer required for construction of the road. Total cost to complete Phase III was $20,952.00.

Phase IV: Construction of Gate and Guardhouse with Toilet Facilities.

Phase IV lasted seven weeks, 30 October – 15 December 2006.

Primary aims of this phase were:

a) general site maintenance and clearance of the western side of surrounding wall; b) re-arrangement of scattered architectural elements near main entrance due to vandalism between phases; c) replacement of old gate; d) construction of guardhouse and toilet facilities for tourists (Fig. 9 – 10); e) parking lot improvements.

Phase IV field staff consisted of Riham Haddad (Department of Antiquities of Jordan), Department of Antiquities Representative; and Khalil Hamidan (Department of Antiquities of Jordan), Department of Antiquities Representative. The Department of Antiquities of Jordan supplied necessary equipment, tools and building materials. The Municipality of Hisban supplied the bulldozer required for construction work. Madaba Mosaic School provided a mosaic with the site's logo for the main entrance. Total cost to complete Phase IV was $14,385.

Fig.8 : The church after the intervention

Fig.9 : General view of the new gate

Fig.10 : The mosaic sign

in the 1971-1976 excavation seasons (Boraas and Horn 1969: 165-217; Boraas and Horn 1973: 35-71, 89-112; Boraas and Horn 1975: 133-167, 183-202; Boraas and Geraty 1976: 29-62, 79-99; Boraas and Geraty 1978: 31-49, 109-128); c) mapping and analysis of structures to be restored in future phases; and d) preparation of a detailed restoration project plan.

Phase I field staff consisted of Tania Tujjo (University of Jordan), Square Supervisor; and Sabah Abu Hudeib (Department of Antiquities of Jordan), Department of Antiquities Representative. Additionally, three workers and a truck were supplied by the Municipality of Hisban to remove thistle overgrowth and collect garbage from the cleanup operations. Total cost to complete Phase I was $9,457.00.

Phase II: Southeast Tower Excavation and Northern Gate/ Wall Cleanup

Phase II lasted three weeks, 19 February – 10 March 2006. Primary aims of this phase were a) general maintenance of the site; b) cleanup of underground installation on north side of Byzantine church (Fig. 3); c) cleanup of north wall in preparation for restoration; and d) excavation of southeast tower to investigate its architectural stratigraphy.

Phase II field staff consisted of Mohammad Sarhan (University of Jordan), Square Supervisor; Yousef Sheebi (University of Mu'tah), Square Supervisor; and Ali Al-Khayyat (Department of Antiquities of Jordan), Department of Antiquities Representative. The Department of Antiquities of Jordan supplied necessary equipment, tools and building materials. The Municipality of Hisban supplied a truck to collect garbage from this phase's operations. Total cost to complete Phase II was $5,769.00.

Phase III: Restoration of Southeast Tower, North Wall and Byzantine Church

Phase III lasted nine weeks, 1 May – 29 June 2006. Primary aims of this phase were a) clearance of the western side of surrounding wall; b) arrangement of scattered architectural elements near main entrance (Fig. 4); c) rewriting of signs along tourist pathways; d) continued excavation and restoration of southeast tower; e) restoration of north wall (Fig.5); and f) restoration work on Byzantine church (Fig. 6 – 8). Restoration of the Byzantine church and north wall required the use of a crane to lift column drums and large wall blocks. A road was prepared to allow crane access of the tall's summit. This road was constructed from the soil dumps of previous excavations, and was hardened by soaking with water.

Phase III field staff consisted of Mohammad Sarhan (University of Jordan), Draftsman; Siba Ayyoub (University of Jordan), Square Supervisor; Shadi

Fig.4 : The columm drums arramged at the entrance

Fig.5 : The Northern wall after restoration

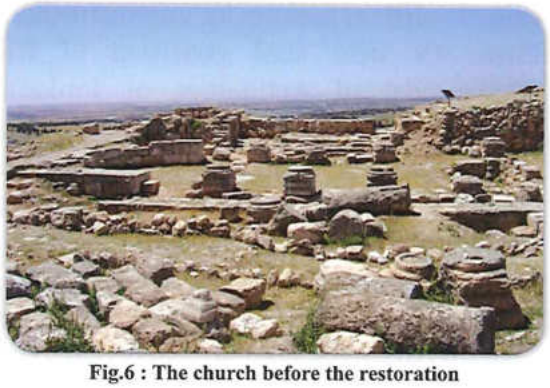


Fig.6 : The church before the restoration

Fig.7 : Placing the capital

Tall Hisban

Project Name: Tall Hisban Restoration Project
Duration: July 24th, 2005 – December 14th, 2006
Number of Workmen: From 5 to 15
Cost of Project: $ 50,227.40 (50.227,40 US$)
Sponsors: Dept.of State of America, Andrews University, Dept.of Antiquities of Jordan, Municipality of Hesban
Directors: General director: Dr.Oystein S. LaBianca
Co-director and Chief Archaeologist: Dr. Bethany Walker
Co-director for Restorations: Arch. Maria Elena Ronza
Representatives: Sabah Abu Hudeib; Ali Al-Khayyat; Basem Al-Abadi; Riham Haddad; Khalil Hamidan

The Tall Hisban Restoration Project has brought significant benefits to not only the cultural heritage site, but also the local economy of the modern village and the Jordanian tourism industry. Perhaps most importantly, the involvement of international, national and local financial and manual investments in the project has contributed to a growing sense of pride and ownership in this historic site by the villagers.

Conducted over one and a half years, with 24 weeks of fieldwork, the Tall Hisban Restoration Project was executed in four phases. Equipment, tools and partial building material expenses were provided by the Department of Antiquities of Jordan, while necessary machinery was supplied by the municipality of Hisban.

The policy of restoration is to clear the excavated structures to clarify their stratigraphic relationships without giving preference to any specific phase. Reconstruction has to be limited to only those structures in imminent danger of collapse, or to those cases were anastilosis is applicable or a scientific and well-documented historical reconstruction of the building is possible.

During the course of this project, several episodes of vandalism occurred during the restoration team's absence from the site. This has been addressed by the construction of an improved gate and guardhouse, which will assure the presence of a guard employed by the Department of Antiquities of Jordan. Further, it is believed that the continued presence of year-round work at the site will help to prevent new acts of vandalism. In this regard, work is underway to develop a new project involving tourist participation at the site to generate income for ongoing maintenance and restoration.

Phase I: Roman Plaza and Preliminary Restoration Studies

Phase I lasted five weeks, 24 July – 27 August 2005. Primary aims of this phase were a) cleanup of tourist pathways and structures exposed during past excavation seasons; b) further exposing, and restoration of, the so-called "Roman plaza" (Fig. 1 – 2) that was excavated

Fig.1 : Roman Plaza area

Fig.2 : The Roman Plaza after clearance

Fig.3 : The installation after cleaning

(Figure 3). This installation is located next to a monumental doorway that leads to a large room paved with a polychrome mosaic floor (excavated in 2002). Extensive excavation was also undertaken on the bedrock ledges that formed the southwestern portion of the building. Several channels carved into the bedrock, a series of small retaining walls, and a large threshold were uncovered (Figure 4).
The location of this site within the urban core of the city of Madaba, within walking distance of the Madaba Museum and Archaeological Park, increases the need to consider its tourism potential. The site maintenance and presentation effort that has accompanied the excavation project has begun preparing the site for future use as public space, for both the local population and the many tourists who visit the city each year.
In conjunction with the excavation efforts at Tell Madaba, a preliminary topographic and surface collection survey was conducted at the neighboring site of Tall Ma'in with a view to initiating excavations at this site in the future. This survey has resulted in the preparation of a topographic map of the site (Figure 5) as well as establishing a record of the various cultural phases present at Ma'in. The Iron Age and the Byzantine period constitute the main periods of occupation at the site; however, there is also a substantial Ayyubid/Mamluke presence.

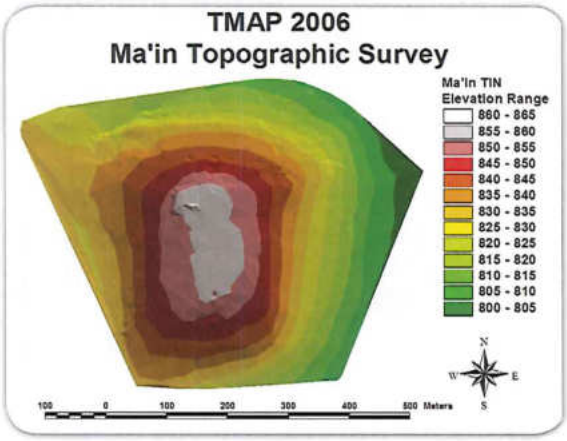


Fig5

Fig3 : An unpaved room equipped with a large, shallow basin

Fig4 : channels carved into the bedrock, a series of small retaining walls, and a large threshold

Tall Madaba and Tall Ma'in

Project Name: Tall Madaba Archaeological Project (TMAP)
Duration: June 5 to June 13, 2006 (39 days)
Number of workmen: 8
Cost of Project: 5,700 JD
Sponsor: University of Toronto, Department of Near and Middle Eastern Civilizations
Director: Timothy P. Harrison
Associate Director: Debra Foran
Assistant Field Director: Andrew Graham
Representative: Khaled Hawari, Abdullah al-Bawarid, and Ashraf al-Khraysheh

The primary objectives of the 2006 TMAP field season were to reopen two units in Field B in order to continue uncovering the Iron Age levels first encountered in 1998 and to complete excavations of Field C complex. The past six seasons of excavation at Tall Madaba have revealed a complex occupational sequence inside the city's fortification wall spanning the Late Ottoman period through to the Iron Age. In addition, the remains of a large building dating to the Late Byzantine/Early Islamic period built against the western face of the pre-classical fortification wall have been exposed.

Excavation efforts in Field B have succeeded in clarifying the nature of the Iron Age settlement at Madaba. A large pillared-building dating to the Iron IIB period was uncovered (Figure 1) with an earlier Iron I/IIA monumental structure underlying it (Figure 2). In addition, a sondage was excavated against the interior face of the massive fortification wall in order to establish its initial construction date. It is now apparent, from the results of this probe, that this portion of the fortification wall was built in the Iron I/Iron IIA period.

The large complex in Field C was built on a series of bedrock ledges that slope to the west. There are several features of this building that indicate it underwent two distinct construction phases, followed by a lengthy period of abandonment. The initial construction phase dates to the Late Byzantine period (6th century ce), while the subsequent renovations and abandonment date to the Early Islamic period (mid-7th to 8th/early 9th centuries ce). Excavations conducted during the 2006 season have contributed to our understanding of the overall layout of this structure. An unpaved room equipped with a large, shallow basin was uncovered

Fig1 : A large pillared-building dating to the Iron IIB period

Fig2 : Iron I/IIA monumental structure

PREVIOUS CONSERVATION TREATMENTS
MORTAR FOR PROTECTING THE CRESTS OF WALLS

name of treatment
Stone repair mortar

Description
The wall crest is the summit of a wall without a covering and therefore a structure subject to the action of several degenerative agents; the wall neck is on the other hand the layer below and generally regards facing surfaces for 15-20 cm.

KIND OF TREATMENT	
X	wall crest protecting

SUBSTRATE OF APPLICATION	
	traditional masonry
X	stone and ancient mortar

SOURCES:

VISUAL OBSERVATION

From the last check made on the site, the conservative works adopted over the years seem to have provided a satisfactory response, continuing to perform the functions for which they were chosen. They are compatible and congruent with the original materials in terms both of appearance and composition.

DATA AVAILABLE

Lime mortars of various compositions were also used for protection of the tops of the walls, so as to have a range of samples to study over time and to discover which mixtures are most suitable for sites with particular characteristics. The checks performed to date on the mortars used for restoration of the walls seem to indicate that the principal defects are loss of knowledge and skill by the local workmen – who tend to replace traditional procedures with generalized use of cement, in spite of the very evidently poor results achieved with cement mortars on traditional walls, above all in restoration operations.

Technical data

COMPOSITION

As things stand, it seems that the best results are those obtained with mortars composed of sieved sand and earth (12 parts), fat lime (1 part), and slaked lime (3 parts), with an aggregate binder ratio of 3:1.
In some cases, one part of white cement was added in place of the same quantity of slaked lime, to facilitate anchoring to the predominant sandstone, varying the ratios to make the mortar leaner.
The only exception to the use of traditional materials and technologies was at the mouth of the cistern where, because of the imminent risk of collapse created by the pressure of earth behind and the advanced state of deterioration of the few sections of ancient wall, a reinforced concrete ring was introduced.

any surviving traces of the working of the materials in the quarries and by the site, the way such materials were laid and the most usual building elements. The samples will provide indications on the effectiveness of the different formulations employed and on their life expectancy. The stresses to which the materials have been subject provide extremely important evidence for the efficacy of any conservation work.

The rediscovery of how traditional materials were worked and the methods employed in their use in building, especially those that are little known and are being disturbingly rapidly lost, can be applied spontaneously or included in the framework of a conservational restoration project that would be an extremely valuable opportunity for the cultural and economic development of the local population.

B Geological studies. The studies and surveys have been primarily aimed at testing structural stability and earthquake risk, a matter of considerable importance when we consider the various well-known events in the historical record. The current natural dynamics of the local terrain are linked with the natural processes to be found in a hot arid environment with cold winters and brief but heavy falls of snow and rain. Rapid-flowing water gulleys are widespread and active, and carry solid materials in short-lived flash floods with resulting potential erosion that is concentrated in the softer lithoid levels. The consequence is solifluction and thermoclastism (freeze-thawing) that produces detritus along all of the slopes. The most damaging process are a result of the poor maintenance of excavations carried out with the development of vegetation along the excavated walls, the accumulation of materials at the bottom of the digs and hence poor drainage of rain water and consequent pooling in areas of accumulation. Surveys of the fronts of quarries along the southern and eastern slopes were also completed.

C Anthropological investigations. The anthropological research unit's intention has been to conduct this research in the villages in the Makawir area in the form of reconnaissance work relating to:

a) the presence of architectural artefacts in a state of ruin, that were used as stone dwellings in the Jordanian and Syrian tradition;

b) more or less recent building works carried out by the local population, using cement blocks, used both for dwelling and other purposes; their type, their architectural characteristics and the positioning of these in relation to that of previous dwellings;

c) the displacement of the present settlement as compared with those of ancient times, with a view to drawing up land-registry maps that had not been updated to include new residential developments.

An ethnographic study was also carried out (involving the gathering of iconographic material, an oral record and observations on the way the habitat has been used), providing suitable data to permit a comparative study of the two types of housing – with regard to exteriors and interiors, an interpretation of tendency to adopt new behavioural models in relation to the use of the habitat and the presence of structural and symbolic features connected to past tradition.

1 In 2006 the following Italian researches from the University of Florence took part in the mission to Machaerous in Jordan: Department of Restoration: Luigi Marino, Simona Carnevale, Michele Coppola and Susanna Ognibene; Department of Earth Sciences: Massimo Coli, and from the University of Rome (Department of Anthropology: Lucilla Rami Ceci) in cooperation with the Studium Biblicum Franciscanum (father Michele Piccirillo) and the Deptarment of Antiquities of the Hashemite Kingdom of Jordan (architect Ali al Khatib). The architect Kaled Jayyusi (of the Housing and Urban Development Corporation, Amman) also took part in the studies.

Input data example for past conservation treatment
at the archaeological site of Makawir

Makawir / Machaerous

Project Name: Building methods and investigations into the state of conservation of ancient heritage sites in Jordan.
Duration:15/10-30/10/2006
Number of Workmen: 8
Sponsor:University of Florance
Director: Prof L. Marino
Representative:Muhamad al-Khatib

As was the case last year, the field work1 was divided into three continuously correlated branches; the surveying of wall structures and conservation work (lead by Prof. L.Marino), geological surveys, headed by . Prof. M.Coli), and anthropological investigations into the villages in the area (headed by Prof. L.Rami Ceci).

A Surveys and studies of building materials, construction methods and the state of conservation. We continued with our systematic surveys of the area of the village of Makawir, with particular regard to the ancient village and the Roman necropolis. Studies at the fortress of Qal`at al- Mashnaqa were aimed at completing surveys of the defensive structures and engineering and water system works. Two assays were carried out in the area of the hot baths.
Assay 1, in tower 2 (on the west side of the inner wall), was carried out to reveal more precisely the relationship between the two connected wall structures attributed to the Hasmonean period and that of King Herod. After cleaning of the specimen it was possible to perform comprehensive archaeological documentation with an architectural survey of the above-ground structures and a draft of a ground plan and cross sections at a scale of 1:50 with profile scale of 1:20, as well as photographs in particular showing profiles as well as a stratigraphic report and an evaluation of the state of conservation.
Assay 2 was carried out in the area of the hot baths (inner side west wall), with the aim of better understanding the use of certain rooms already considered part of the hot water system at Herod's palace: the area identified as the calidarium and two neighbouring and communicating rooms that were perhaps part of the sudatorium. Suitable records were also made in this case, including an architectural survey of above-ground structures, with accompanying plan maps and cross-section diagrams on a scale of 1:50, photographic documentation for the purpose also of comparative study with the photographs taken at the time of the excavations carried out in the nineteen eighties, a stratigraphic report, an assessment of the state of conservation and checks on conservation works performed during last year's works.
Further studies were carried out on the state of conservation of the fortress and of the village of Makawir. Checks were in particular performed on the restoration works performed during Stefano Pulga's investigative campaign of last year, which involved consolidation work of fragments of plaster strengthened with lime and ash mortar. Numerous tests were carried out in situ of the results obtained and a new series of surveys and records were started in relation to the surfaces worked on in collaboration with Franco Sciorilli, a restorer who worked on the site with us last year. A set of photographs were taken of current conditions (using real and false colours) intended for comparison with those taken last year, so that any intervening changes could be studied. New restoration work "by sample" was performed on the walls using micro-cementation and stuccoing and localised repositioning. At the same time some limited corrective work was carried out in relation to the consolidation and protection works performed last year.
Careful observations were made to assess the state of conservation and the presence of any processes of degradation of materials and structural instability. An important aspect of our work involved the study of local materials and traditional building methods with a view to documenting, above all,

built against the southern wall of the high place. The relationships of this cultic space to the high place and the main sanctuary still remain obscure, warranting further excavations for precise dating and functional analysis. Exposure of the northern side of the high place is still limited and, at this point, we only know that the sacred precinct probably extended beyond the high place. Remains of several wall lines, potential stairs, and a couple of interesting cultic objects such as animal and human figurines were excavated in this area.

'Atruz temple overview

Remains of high place

Khirbat 'Ataruz

Project Name:The Khirbat 'Ataruz Regional Project
Duration: July 12- August 21, 2006
Number of Workmen: 20
Cost of Project: $12,000 (including USA budget)
Sponsor: La Sierra University, the Versacare Foundation
Director: Chang-ho Ji
Representative: Adeeb abu Shmais

After the 2002-04 discovery of the Iron Age temple at the acropolis, the 2006 fourth season of excavation at Khirbat `Ataruz, located in the region of Jabal Hamida, centered on the acropolis area, opening eight new 6 x 6 m squares to enhance our knowledge of the overall plan of the cultic precinct and its vicinity.

As stated in the previous press release, Khirbat 'Ataruz is almost certain to be 'Ataroth in the Hebrew Bible and the Mesha Inscription. According to the textual evidence, 'Ataroth was first settled by the Gadites during the Iron I period, and the Moabites fought against and killed the entire population of the city during the early Iron II period. The Moabites moved the cultic materials away from 'Ataroth to the city of Kerioth.

The most important finding in the course of the 2006 excavation was the high place, the structure located about 10 m and 20 m northeast of the two Iron Age outdoor altars and the main sanctuary room, respectively, both of which were uncovered during 2002 and 2004. The date of the high place goes back to the late tenth and early ninth centuries BCE, contemporary with the first and second phases of the main temple building. In view of this chronological congruity and geographical proximity, the high place is most likely part of the cultic complex that once stood at the acropolis of Khirbat 'Ataruz during the periods of late Iron I and early Iron II. The high place itself was a rectangular tower-like structure equipped with a five-step stair leading up from the eastern courtyard. Also encompassing the vicinity of the high place were open areas and a couple of wall lines, the walls possibly constituted rooms or buildings attached to the high place.

Excavations at the southeastern area of the temple complex revealed another Iron II room or courtyard with a standing stone and several well-carved stone plates whose functions are as yet unknown. One lamp and several cultic objects were uncovered in the area, most of which were located near the standing stone that was

Cultic hearth

Stone structures

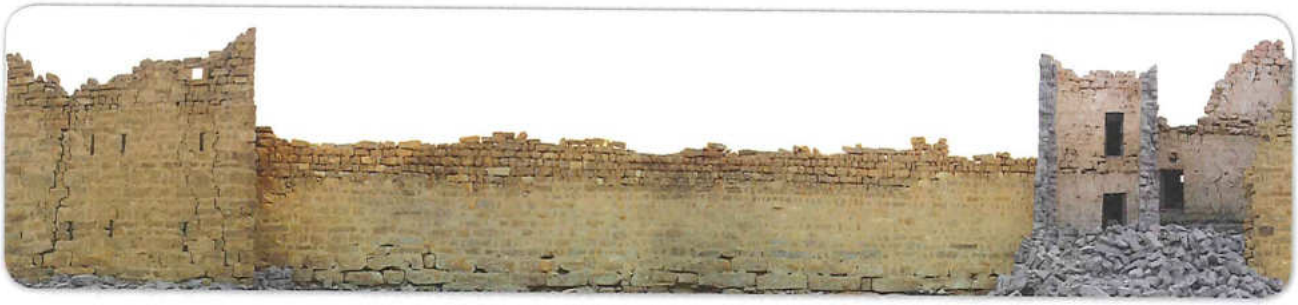
Arce, I. : "Umayyad Building Techniques: The Construction of a Cultural & Political Identity". In (Goodson, C. Ed.) Past Presented (in press Brill Ed.).

3.- Technology in Transition. Late Antiquity Series Conference. Siena. May 2004.

-Paper presented titled:
Arce, I. : "Umayyad Building Techniques and the Merging of Roman-Byzantine and Partho-Sassanian Traditions: Continuity and Change". In I. Jacobs, A. Sarantis and E. Zanini "eds.) Technology in Transition: AD 300-650 (Late Antique Archaeology 4.1) (Leiden forthcoming).
Other relevant papers presented and published in international conferences related to the field of research of this project are:
Arce, I. (2006a -in press-): "The Palatine City at Amman Citadel.The Construction of a Palatine Architecture under the Umayyads (I"), in Residences, castles, settlements. Transformation Processes from Late Antiquity to Early Islam in Bilad al-Sham (proceedings of the international Colloquium on Late Antique and Early Islamic Archaeology in Bilad al-Sham organised by the Ministry of Culture – Directorate General of Antiquities and Museums in Syria and Deutsches Archäologisches Institut, Orient–Abteilung, Damascus November 2006
Arce, I. (2006b -in press-): Qasr Halabat. The Construction of a Palatine Architecture under the Umayyads (II) ", in Residences, castles, settlements. Transformation Processes from Late Antiquity to Early Islam in Bilad al-Sham (proceedings of the international Colloquium on Late Antique and Early Islamic Archaeology in Bilad al-Sham organised by the Ministry of Culture – Directorate General of Antiquities and Museums in Syria and Deutsches Archäologisches Institut, Orient–Abteilung, Damascus November 2006
Arce, I (2006c): "Qasr al-Hallabat: Continuity & Change from the Roman-Byzantine to the Umayyad Period" in proceedings IX International Conference 'Studies on the History and the Archaeology of Jordan' SHAJ IX Petra (2004) DoA Amman.
Arce, I. (2004): "The Umayyad Hydraulic System at Amman Citadel-Collection, Storage, Distribution, Use and Sewage", in Orient-Archäologie Band 13. Proceedings of Men of Dikes and Canals. International Conference on The Archaeology of Water in the Middle East. Petra June 1999. German Archaeological Institute Oriental Section. (Bienert, H. & Haesser, J. Eds). pp. 243-260. VML Ed. Rahden.
Arce, I (2005): "Qasr Hallabat (Jordan) Revisited: Reassessment of the Material Evidence". In Muslim Military Architecture (Kennedy, H. Ed). Brill Ed.
Arce, I. (2003a): "From the Diaphragm Arch to the Ribbed Vault. An Hypothesis for the Birth and Development of a Building Technique", in Proceedings 1st. International Congress on Construction History, pp 225-241. Madrid.
Arce, I. (2003b): "Early Islamic Lime Kilns from the Near East. The Cases from Amman Citadel", in Proceedings 1st. International Congress on Construction History, pp 213-224. Madrid.
Arce, I. (2001a): "The Early Islamic Stucco Technique and the Partho-Sassanian Tradition" in Lo Stucco Proceedings of the XVII International Conference "Scienza e Beni Culturali" (Biscontin, G. & Driussi, G. (Eds.). pp.107-123 Venezia.
Arce, I. (2001b): "The Umayyad Carved Stucco from Amman Citadel Congregational Mosque", in Lo Stucco Proceedings of the XVII International Conference "Scienza e Beni Culturali" (Biscontin, G. & Driussi, G. (Eds.). pp.107-123 Venezia.

Arce, I. (2000): "Un tipo inédito de trompas en la arquitectura omeya", in Proceedings of III Congreso Nacional de Historia de la Construcción. Instituto Juan de Herrera, CEDEX (Huerta, S. Ed.). Madrid.

Qasr Bashir SE Façade Elevation scale 1/50



Qasr Bashir NE Façade Elevation scale 1/50

unique building material), leaning against each other in order to conform a multi-stratified built complex of great interest. This year has been carried out the documentation of the court of building XVII.
The "oculus" house offer us the interest of analyse the transformation of a pre-existing structure into a prestige-residential house with highly sophisticated surface dressing and jointing, similar to that of the tower and main building of the barracks, showing clearly the technical details of its construction (with rough internal finishes intended to be heavily plastered), that can be studied here thoroughly. This year has been carried out the documentation of the main façade and the inner section of the main structure.

Secondly at Qasr Bashir, a well dated Tetrarchic quadriburgium that offers us the possibility of study the limestone building techniques used by the Roman Army in the turn of the 4th C. AD.This year has been carried out the documentation of the external and internal elevations, except the internal section of the towers.

OUTCOME AND RESULTS

Some preliminary results on the Umayyad Building Techniques have been presented in international forums recently:

1.- Second International Congress on Construction History.
Cambridge. April 2006.

-Paper presented titled: (published in the Conference proceedings) titled:
Arce, I. : "Umayyad Arches, Vaults nd Domes: Merging and Re-creation. Contributions to Early Islamic Construction History". In Proceedings II International Congress on Costruction History. Royal Society of Construction History. Cambridge, March 2006.

2.- Past Presented. Seminar organised by Birbeck College, University Central London. March 2006.

-Paper presented titled:

Qasr al- Harrana

Photogrametric recording was carried out in rooms 51 & 59, corresponding to the complex ceilings built with diaphragm arches and semi-domes on squinches. The photogrametric rectification of these rooms is about to be finished. Ortho-photographic rectified documentation of the external elevations is being produced as well.Pa rticular stress is put in the comparative analysis with Sassanian and Iranian-origin building techniques, specially with those of Tureng Tepe, Sarvistan, etc.

Qasr Burqu`,

Orthophotographic recording of the main tower of the complex.

Qasr `Ayn as-Sil, Mushatta, Usaykhim and al-Qastal.
Partial documentation work was carried out during the 2005 campaign. Still under work. Ortho-photographic rectification work is being carried out, as well as new and accurate plans. In next campaigns the work will be finished. Relevant information is being retrieved, specially from Burqu and Qastal, related to the transitional period between Late Roman and Umayyad periods. This information is related to the reuse and transformation of pre-Islamic structures and its historical significance.

AIMS AND GOALS OF THE 2006 CAMPAIGN

In the 2006 campaign we have concentrated our efforts in two places related to two different "worlds" of building techniques corresponding to the Basalt and Limestone, and to two different periods, that of the Tetrarchic Period, and that of Late Roman period. Some of these techniques have been found mixed in the site of Hallabat, due to its historical and geographical location in the border region between the natural areas where these two lithotypes are to be found, and spanning the two temporal milestones mentioned (between the turn of the 4th C AD and the 8th C AD). The interest of finding them at Hallabat, related to a well established sequence of use that encompasses the whole period of our study, has triggered our interest to study them in depth in their "natural environments", using as case studies Umm al Jimal and Qasr Bashir.

Umm al - Jimal Oculus house, scale 1/50

Qasr Burqu Tower, scale 1/50

Firstly at Umm al Jimal, (clearly belonging to the "Basalt-Built" architectural region), that offers interesting sequences of building techniques from Early to Late Roman and Islamic periods. These sequences that can be observed easily, have not been defined yet, being their study and clear definition our main aim in this site.
For this purpose we have continue our study in the interior of the Barracks complex, and started new documentation and research at the complex integrated by the so called XVII and XVIII houses and the "oculus house" :
The Interior of the Barracks allow us to complete the study started in the exterior and to gain in depth knowledge of technical details and
The XVII &XVIII houses at Umm al Jimal offer an interesting agglomeration of structures from different periods using different and characteristic building techniques (all of them using basalt as

This information provides relevant historical data related to the different changes of use of the built structure (related to the different building phases), as well as technical information about the structure itself, essential for its management and preservation.
This process and the related methodology offers the advantage of carrying out the study of the structures without direct intervention nor interference with them (apart from eventual micro-sampling of mortar). The first step foresees the documentation with Ortho-Photography recording and, when necessary, photogrammetry recording. The first procedure (ortho-rectified photography) is the standard one used for internal and external recording elevations, meanwhile photogrammetry is used in case of complex three-dimensional structures as arches, vaults and domes. In both cases it is no necessary the direct contact with the structure itself, safeguarding thus more efficiently its preservation. Simultaneously, the plan of the structure is recorded using the tachimetric instruments, as well as other more traditional auxiliary methods.
The first observations on the "built stratigraphy" are carried out in situ at this stage, being recorded on printed photographs taken in advance, that are used, as well, to mark the natural reference points chosen. When appropriate meteorological conditions occur, the required final photos are taken to avoid cast shadows or inadequate lighting conditions. Later, in the office, the ortho-photographic and/or photogrametric rectification is carried out to provide the basic graphic documentation for the following steps of the analysis and research.
The stratigraphy detected and recorded on the graphic support is the basis for further analysis of the building materials and techniques used. This information is related as well, on the one hand, to the research on the changes in architectural typologies used in the different periods/phases identified and the related change of use of the structure; and on the other hand to the eventual changes of the mechanical static equilibrium of the structure, that through an adequate "reading" and interpretation of the structural lesions and damages (and the repairs carried out throughout its history) provides as well a "mechanical" record of the structural problems of the building and clues about eventual future problems to be tackled.
This documentation represent an essential tool for management of the sites, a helpful aid for monitoring the state of preservation, and a reliable source of information for eventual interventions to be carried out. This documentation and research project as a whole is intended as part the holistic approach of the Spanish Ministry of Culture and the Spanish Agency for International Co-operation to strengthen the management resources of the Department of Antiquities and to collaborate in the development and "capacity building" of its personnel and material resources. The long-lasting collaboration between Spain and Jordan in the field of preservation of Cultural Heritage, and specially Early Islamic Heritage, founds in this project a new step to strengthen this collaboration.

SITES AND PERIOD OBJECT OF STUDY.

Since the start of this project different structures have been object of our ongoing study:

Qasr al- Hallabat.

This structure is providing a complete sequence of building activities and related techniques used from Early Roman period throughout Umayyad period. This work is carried in parallel to the excavation and restoration of the monument, directed by Dr. Arce, as well. Orthorectified photographic documentation was provided to the DoA on 2004 & 2005. A virtual 3D reconstruction with computer generated images is under production to be displayed in the Site Museum and Visitors' Centre at Hallabat. It includes the virtual reconstruction of the site in Umayyad and pre-Umayyad periods as well as the recreation of different architectural elements disappeared.

Umm al Jimal

At Umm al Jimal the focus of the work was initially put on the so-called "Barracks" complex and other civil structures. Orthorectified photographic documentation was provided to the DoA on spring 2005 This year campaign has continued with the documentation of the internal sections of the structure, and has started the documentation of other relevant sites (see below).

Late Antique and Ummayad Architecture Analysis

Project Name : Building Techniques & Architectural Typologies From Late Antiquity To Umayyad Period Documentation and Research Project
Duration : : (ongoing) 3 years /3rd Campaign /November-December 2006
Number of Workmen :
Cost of Project (2006 campaign): Total loan from the Spanish Authorities 20.000. euro
Sponsors : Sponsor: Spanish Ministry of Culture International Cooperation, Jordanian Department of Antiquities, the Ministry of Tourism and Antiquities, and the Spanish Embassy.
Director : Dr. Ignacio Acre, Mr. Ignacio Moscoso Sarabia , Mr. Fernando Arce Sainz Mrs. María Teresa Fernández Pareja. Mrs. Ana Bohigas
Representative : Mr. Ahmad Lash,

AIM OF THE PROJECT

The main aim of this project is two-folded: On the one hand improve the knowledge and documentation of the archaeological built heritage of Jordan, in order to ease its adequate management; On the other hand it is aimed to contribute to the research on the building typologies and building techniques used in the transitional period between Late Antiquity and Early Islamic periods as a way to enhance our knowledge of Construction History of these periods and consequently to help in the adequate maintenance, management and preservation of these built structures.
The historical period of our interest spans from Late Antiquity to Umayyad periods and focuses on the processes of continuity/change that took place during the Early Islamic Period. The project encompasses a series of relevant buildings from these periods.
The first campaigns are devoted to the record and documentation of the built structures and the commencement of the analysis of the building phases and related sequence of building techniques used in each of the historical periods. Later, the information will be integrated in a series of comprehensive documents, useful for the adequate management of the sites, and adequate training of the DoA personnel will be carried out.

METHODOLOGY

The instruments used in our work encompasses those employed by Archaeology of Architecture, trying to analyse the built structures with a holistic approach that focuses on its "material structure", and the transformations, alteration, destruction and reconstruction underwent by these buildings. All these transformations have left clear traces on the walls of the buildings that can be read and interpreted. The fact that these interventions and their effects can be seen as stratified sequences of matter, means that stratigraphy can be used to read and interpret the existing sequence of construction and destruction activities that determines the history of that structure. The huge amount of information deposited in that "built archive" that constitutes the built structure itself, is the best and more reliable record of its "built" history, clearly related to the changes of use and meaning throughout its whole history.
The structures that are relevant for our research are both the multi -stratified (i.e. those that present multiple transformations that have taken place throughout its existence), or alternatively, the well dated and built-in-one-single-phase structures. The combination of the "building techniques sequences" offered by the first kind of structures (that can be used as the pottery fossil-guides used in standard archaeology, providing stratigraphic sequences in archaeological contexts), together with the absolute dating offered by the second kind of well dated structures, provides a comprehensive picture of the transformations occurred in that historical period in terms of architectural typologies and building techniques used.

crew conducted topographic mapping of the site by walking over the entire surface and nearby landscape and simultaneously recording more than 2000 three-dimensional coordinates with a Total Station (fig.3). The latitude, longitude and elevation coordinates that we recorded were then used to produce a high-resolution contour map of the site. We also mapped the locations of Muheisen's old excavation trenches, the locations of the remaining barbed-wire fence posts, and a portion of the wadi system immediately to the south of the site.

A cement and barbed wire fence once demarcated the site's boundaries and prevented four-wheel drive trucks from driving over the fragile archaeological remains. However, the fence has recently been damaged and tire tracks can clearly be seen on the surface of the site, cutting into and destroying the archaeological deposits. We conducted our survey to document the features of the site in its current state and assess any disturbance. The old excavation trenches are heavily eroded and today are visible as slumped areas on the site's surface (Fig.4). In addition, the deposits are continually being eroded along the site's northern and eastern boundaries. The most immediate cause of destruction, however, is the continued four-wheel drive traffic over the site which churns up and breaks artefacts and destroys fragile features like hearths (fig.5). The most effective way to prevent this damage is to rebuild the fence around the site. We hope that the results of our short field work and any future work at the site will help, not only to further our knowledge of the Epipalaeolithic period in Jordan, but also to document and preserve the important archaeological remains.

Fig .4 : Al- Kharrana's archaeological deposits are extremely rich; high densities of flints, shell and fauna can be seen eroding out of the walls of the old excavation trenches.

Fig.5 : The fence surrounded the site has been pulled down in places and four-wheel drive trucks drive over the surface and damage the archaeological deposits.

Al-Kharrana IV, Azraq

Project Name: Al- Kharrana Epipalaeolithic Survey Project
Duration: July 15-July 17, 2006
Number of workmen: 2 (British Students)
Cost of Project: £409 GBP
Sponsor: SSHRC (Canada) and University of Cambridge
Director: Dr. Lisa Maher
Representative: Aref Dhaythem

From July 15 to July 17, 2006, Lisa Maher of the University of Cambridge, Tobias Richter, University College London, and Daniel Jones, University of Wales, Lampeter, conducted three days of archaeological survey to document and map the Epipalaeolithic site of al-Kharrana IV. Our field work focussed on recording the site boundaries and its archaeological features and involved detailed mapping of the site, including its topography, the location of old excavation trenches and all other surface features.

During the 1980s Mujahed Muheisen conducted excavations at the large, multi-phase site of al-Kharrana IV, located 2 km southwest of Qasr al- Kharrana (Fig.1). The site is a low mound covered by a dense concentration of dark-coloured flints and animal bone (Fig.2). It is partially enclosed by a barbed wire fence. Al- Kharrana IV is an extremely unique and important Epipalaeolithic site because of its large size (over 20,000 m2) and the high density of artefacts, both on the surface and in deposits that reach a depth of at least 1.5 m. Muheisen documented at least four occupation phases during the Epipalaeolithic period, containing a complex suite of archaeology remains, such as postholes for hut structures, living floors, hearths, bone tools, ground stone, extremely dense faunal material and lithic tools and debitage, and even two human burials (Muheisen 1985, 1988a, 1988b). Radiocarbon dates place several of the occupational phases between 15,700 and 10,620 uncalibrated BP, but earlier Epipalaeolithic and Upper Palaeolithic artefacts have also been documented (Muheisen 1988a, 1988b). Sites containing such a wide array of features are extremely rare from this period in Jordan.Al- Kharrana IV has the potential to provide us with key data on palaeoclimate, prehistoric technology, mortuary practices, sedentism, architecture, and plant-use prior to the Neolithic period.

Our primary objective during this short survey was to document the condition of the site 20 years after the last excavations and to produce an updated map of the site and its features. Over a three-day period, our small

Fig .1 : The Epipalaeolithic site of al- Kharrana IV is marked by a surface pavement of dark coloured flints and is surrounded by a fence.

Fig .2 : A close-up view of the surface of the site showing the high concentration of flints and animal bone.

Fig .3 : We surveyed the site to produce a topographic map of the site and relocate old excavation trenches (excavation trenches visible in the background).

meantime, the investigations demonstrated the existence of a sparse village on top of the ruins of the previous city, which provided a lot of information on daily life of its inhabitants. The discovery of the main city-gate, moreover, provided a basic key for the interpretation of the urban topography and an important monument to be included in the project of the future Archaeological Park. For this reason, intensive restoration works were undertaken rehabilitating the stretch of city-wall excavated in 2005, and restoration of the gate itself was started (Fig. 5).

Fig 4 : Area F:ten squares opened on the easternmost plateau

fig 5 : Restoration works undertaken during the 2006 season rehabilitating the stretch of the city-wall excavated in 2005

The extension of Area B North (Fig.1) towards the west allowed the identification of the main city-gate, a simple passageway 1.4 m wide leading into a corridor, preceded by a step (Fig.2). The gate was blocked by a stone wall, which was removed in order to allow the restoration of this important monument preserved to a height of more than 2.2 m. Outside the city-wall a paved passage was connected to an outer gate, opening in a massive outer fortification wall made of large boulders (1.4-1.6 m thick), which ran parallel to the main city-wall. The exploration of this further structure continued towards the north and west, opening four more squares and discovering that a reinforcing buttress abutted on it, and that in that direction the state of preservation of the massive defensive system of the site was preserved to up to 3 m of elevation. The overall layout of the city-gate and its related structures from the one hand testifies to a very complex and well protected entrance to the city, from the other hand, illustrates the major constructive phases of the town. The town of Batrawy was founded in the Early Bronze II, with a single massive city-wall 3.5 m thick, and rebuilt in the Early Bronze IIIA, when the outer line of fortification was added, protected also by a series of bastions and towers.

Fig .3 : Area B South, installation T.413, connected to the huge public building in use during the Early Bronze III, from south.

In Area B South, inside the city-wall, underneath a very interesting portion of the Early Bronze Age IV village (with at least two superimposed structural phases of houses and installations), a huge public building was discovered, with a perimeter wall parallel to the city-wall and the main entrance just east of the city-gate. The building was in use during the Early Bronze III, with several transformations in the Early Bronze IIIB, when it was destroyed by a fierce fire (Fig.3). The excavation of the corridor inside the city-wall also allowed the identification of a staircase leading to the top of the city-wall, which suggests an elevation of around 10 m for the city-wall itself.

Area D – the south-western tower

A further area of excavation was opened in the south-western corner of the site, where a huge tower protected the town and controlled the underlying valley. The round shape of the tower has been outlined and the city-wall adjoining it has been brought partly to light. Different layers of occupation and destruction were excavated inside the city-wall, belonging to the whole period of occupation of the site (Early Bronze II-IV).

Area E – the southern fortification

A trench of two squares was opened in the middle of the southern line of fortifications, where a postern was identified, with a staircase leading into the city. The filling inside the city-wall was characterized by heavy traces of a violent destruction, which affected the town around the end of the Early Bronze III.

Area F – the easternmost plateau

An area of ten squares was opened on the easternmost plateau, where a substantial structure was visible on the ground. Sparse remains of Early Bronze IV dwellings were discovered in the uppermost layer, while a huge building, very badly preserved, occupied the area in the Early Bronze II-III. This building has a broad-room plan and a raised circular platform in front of it. This scanty evidence supports the hypothesis that this was a broad-room temple with a related raised platform (Fig. 4).

The second season of excavations at Khirbat al-Batrawi produced meaningful new evidence regarding the status of the town, which can definitely be described as an urban centre with a well-articulated defensive system and a series of public buildings inside it during the Early Bronze II and III. In the

Khirbat al-Batrawi

Project Name: Urban Origins in the Wadi az- Zarqa
Duration: May 14th and June 11th 2006
Number of workmen: 22 (plus 2 restorers)
Cost of Project: 10,700 JD
Sponsor: Rome University "La Sapienza", Italian Ministry of Foreign Affairs
Director: Prof. Lorenzo Nigro
Representative: Mr. Romel Ghraib

The second season of excavations at Khirbat al-Batrawi (Lat. 32°05',218" N, Long. 36°04',237" E), an prominent Early Bronze Age site in the Upper Wadi az-Zarqa, was carried out under the auspices of the Department of Antiquities of Jordan and in cooperation with Queen Rania's Institute of Tourism and Cultural Heritage of the Hashemite University of Zarqa, with the aim of further investigating the site history and topography, of clarifying its periodisation, and of restoring part of the impressive city-wall of the Early Bronze Age already brought to light in the first season.

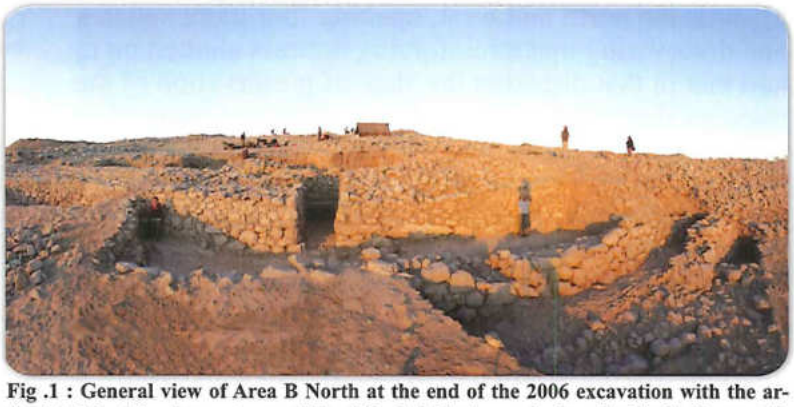


Fig .1 : General view of Area B North at the end of the 2006 excavation with the articulated fortification system which defended the town during the Early Bronze II-III. Three parallel lines of fortification walls were brought to light: W.105, the inner and major city-wall; W.155, the outer wall; and the reinforcing buttress w.165. In the middle of W.105 the city-gate L.160 has been excavated.

Excavations were carried out in the two areas already investigated in the first season (Area A, on the Acropolis, Area B, on the northern fortification) and in three new areas located in different spots of the site (Area D, at the south-western corner of the hill; Area E, at the mid of the its southern side; Area F, on the eastern plateau).

Area A – the Acropolis

Excavations on the Acropolis were focused in Area A West, where a large portion of the Early Bronze Age IV village had already been brought to light in year 2005. Here five new squares were opened adding at least four new houses to the previously known layout of the village. Underneath the EB IV occupation layers more substantial Early Bronze III structures were uncovered in a very bad state of preservation. Nonetheless, they testified to the earlier occupation of the Acropolis.

Fig .2 : The City-Gate L.160, from north.

Area B – the City-Gate

Excavations at the mid of the northern line of fortifications were subdivided into two connected areas: Area B North outside the city-wall and Area B South inside the city-wall.

wall straight in the south, with the opposite wall curved. It is divided in three parts: one is formed by the head in which is placed a platform which will be described later, another one a lengthened room and, in the opposite side of the house a lengthened room, without access to the rest of the house. This construction differs in some aspects from the characteristics of the rooms in al-Mutawwaq, and its possible function may have been different. The house is 8.25m long by 3.50m wide.

The construction technique is similar to the rest of houses in Mutawwaq, but the entire wall orientated to the east is formed by the bedrock, which presents here a straight alignment with two steps.

In the part of the head of the house stands a rocky projection with a natural hole in its interior, filled with soil and small stone blocks and later covered with three lengthened flagstones. A fragment of a down-curved handled vessel and a complete saucer were found in its interior

This projection stood out from the floor of the house and a platform was built in the west elevated on a low wall of two lines of stone, the upper part covered by a pavement.

The space between this platform and the wall that closes the room in the south was filled with soil and pebbles, but it is possible that had been covered by a rough pavement, of which only a fragment in the extreme edge of this room is conserved, partially deformed by the collapse of the east wall. Some remains of vessels were found on the floor of this house.

The room in the south is narrow and elongated, it is 3m by 1.39m. The entrance to this room is from the outside through the space left by a gap in the wall. In this room the rock presents two natural steps. Some remains of jars were found scattered in the room.

House 77. Platform

Room in the House 77.

Pottery.

The pottery shapes in the set of rooms that are being examined at present are similar to those from the rest of the village. The difference is in the composition of the assemblage, mainly formed by storage jars and saucers. In house 77 the pottery is not abundant but it seems to correspond in its composition to the characteristic shapes found in this complex of the sanctuary.

Jabal al-Mutawwaq

Project Name: Jabal al-Mutawwaq Project
Duration:15/7-13/8/2006
Number of workmen: 10
Cost of Project: 2488 JD
Sponsor: Spanish Ministry of Culture - IPHE
Director: Juan Fernandez-Tresqueres Velasco
Representatives: Nasir Khasawna

With the 2006 campaign in the village of Jabal Al-Mutawwaq the excavation of the complex formed by houses 76 and 77, which has been excavated since the 2004 campaign, has been finished. This group of rooms, yard and five outbuildings, was defined as a sanctuary, basing this definition on a series of architectural characteristics and, especially, the characteristics of the pottery which were very different from the group of shapes and types normally found in the occupied houses, and the peculiar decorative elements found in the vessels.

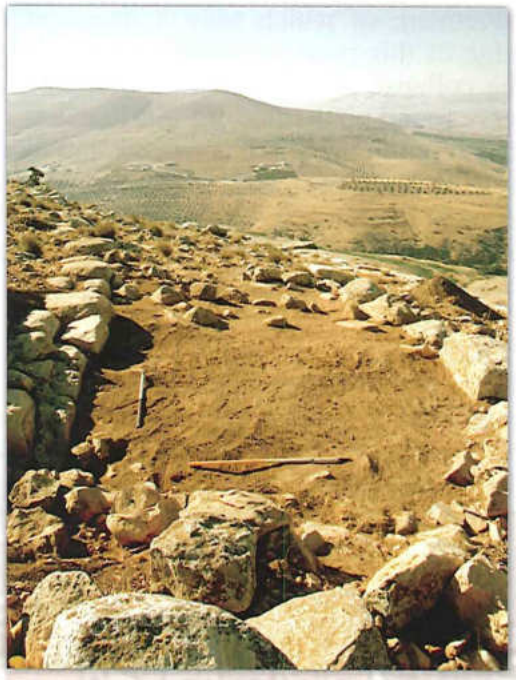
Room 1 in house 76 and stepped floor

Excavation in Room 1.

This Room 1 is one of the group of rooms built in the big yard of house 76. It is placed in the north of the yard, with an entrance from the outside formed by an interruption in the wall. This simple door allows access to the small room of 4.10 m by 2.48 m, with a stepped floor due to the inclination of the rock. In the east angle a new door gives access to a stair formed naturally in the rock but possibly cut away, by which we reach, going along the edge of the wall of the room 3 (excavated during the 2005 campaign), the upper part of the yard.
In this room only some fragments of storage jars and (during the 2005 campaign) a vertical handled jar decorated with a red lineal pattern were found.

West wall of the yard.

In this sector the wall of the yard could not be defined until now due to the collapses that seemed to have totally destroyed it. However, its base was conserved in the edge of a rocky step that joins the structures built in the yard with the north wall of house 76.



House 77.

House 77.

House 77 is placed at just one meter from the southeast wall of house 76, near the door opened in that wall.
The excavation of this house was the main purpose of the 2006 campaign. It is an apsidal house with the closing

The main goals of the project are:

1.- Excavate thoroughly the complex, and proceed with the study of the material evidence.

2.- Consolidate the existing structures, and carry out the anastylosis of the architectural elements retrieved and under study.

3.- Study the historical meaning and transformation of the site with special attention to:
3.1.- The transformation of a Roman-Byzantine military structure into a civil (representative) one, once the border it was intended to defend (the Limes Arabicus) had ceased to exist; trying to clarify when this process actually occurred
3.2.- Solve the problem of the precise architectural phases of the qasr, on the basis of the use of stratigraphic analysis of the building itself, seeking a reliable relative sequence of the building activities and the related "different buildings" that have succeeded and superseded each other, as the result of successive demolition, ruin, transformation and refurbishment, due both to natural and anthropic causes. This architectural sequence is essential for any attempt to interpretate the change of use of the structure throughout its history.

Al - Hallabat mosque

4.- Study the architectural features of the Mosque in order to gain the required knowledge of the building techniques and decorative language used in its design and construction in order to be able to carry out its proper restoration.

5.- Carry out a thorough presentation of the site and the scientific conclusions achieved for visitors. A Visitors' Centre will be constructed to display the didactic information. This building, funded by the Spanish Agency for International Cooperation, is intended also as a Site Museum, to display the finds and related material.

6.- The final aim is to provide a focus of interest for local and foreign visitors that will be able to understand better the meaning and significance of the site, that at the same time will, help to the economic development of the area by means of the development of Cultural Tourism.

Qasr al- Hallabat

Project Name: Excavation and restoration of Qasr al-Hallabat Mosque
Duration: 2 years
Number of workmen: approx. 30
Cost of Project: 280,000. euro
Sponsors: Spanish Agency for International Cooperation, Jordanian Department of Antiquities, the Ministry of Tourism and Antiquities, and the Spanish Embassy.
Director: Dr. Ignacio Arce.
Representative: Rommel Ghareib

The Excavation and Restoration Project of the complex of Hallabat started in the spring of 2002. During the period 2002-2005 the excavation and restoration of the main structure of the Qasr was carried out. The restoration (anastilosys) of the Mosque is now being carried out.

The complex of Qasr al- Hallabat is located 60k to the NE of Amman, and 12k to the East of the Via Nova Trajana. It is composed of several buildings and structures, the oldest surviving remains of which date from Roman times, while the latest phase of use corresponds to the Umayyad period, involving a final refurbishment of the qasr that included a rich decoration of mosaics, mural paintings and carved stucco, as well as the construction of brand new structures like the mosque and the bath at Hammam as-Sarah(where the next step of the restoration program of this complex will take place).

In previous seasons the building phases and of use of the qasr, with the transformation of a Roman-Byzantine fort of the Limes-Arabicus into a palace and a monastery in the 6th (most probably by the Ghassanid phylarcs), and later into an Umayyad palace, were clarified and its proper restoration (including some of the mosaic pavements recently discovered) was carried out.

The process included a thorough study and classification of all the architectural remains present at the site. It was evident that despite the systematic looting of stones from the mosque, most of the original elements of its specific architectural elements had survived this robbing process. This was due to their unusual and rare shapes that, fortunately, led to be discarded by the looters as useless for their purposes. We soon realised that it was possible to restore the building using the original elements (anastylosis) including an extraordinary and rare mihrab, and a porch with a dome on pendentives.

Restoration work : al - mihrab

near future. Area B also produced an example of mobile art, which is rare from early prehistoric periods in Jordan, and indeed in the entire Levant. This fragment of an incised piece of bone shows a series of cross cutting and parallel lines, the meaning of which eludes us at present.

Excavation Area C produced a mixed assemblage of early Neolithic, late Epipalaeolithic and early Epipalaeolithic chipped stone tools. The presence of el-Khiam, Byblos and Jericho projectile points, as well as the presence of numerous small beads made of Dabba marble greenstone, suggests an early to middle PPNB date. The presence of late Epipalaeolithic hunter-gatherers in the same area is indicated by the presence of numerous lunate microliths. Diagnostic early Epipalaeolithic microliths include finely backed La Mouillah points and bladelets, which probably pre-date the assemblage recovered from areas A and B.

Despite finding abundant evidence of human settlement at` Ayn Qaysiyya, this year's campaign failed to locate the original locus of occupation at the site. No clear structures or habitation areas were found and it appears that more research has to be undertaken to understand the morphology of the prehistoric landscape before the late Pleistocene and early Holocene settlement can be found. The palaeoenvironmental and geological research carried out this year has begun to address this issue and further studies of the sedimentological evolution of the Azraq Oasis will accompany future excavations at the site.

It is hoped that our research will eventually be incorporated in the interpretational and educational program carried out by the Royal Society for the Conservation of Nature in the Azraq Wetlands Reserve.

Chippe stone tools

Fragment of an incised piece of bone

'Ayn Qaysiyya, Azraq al-Janubi

Project Name: `Ayn Qaysiyya Epipalaeolithic Project
Duration: July 15th – August 24th 2006
Number of workmen: 2
Cost of Project: 6870,- JD
Sponsor: Institute of Archaeology, University College London; University of London; Council for British Research in the Levant
Director: Tobias Richter
Representatives: Mr. Ahmad Lash, Mr. Aref al-Dahatham

From mid July to mid August 2006 the Institute of Archaeology at University College London (UCL) carried out its second season of excavations at the early Epipalaeolithic site of `Ayn Qaysiyya in the Azraq Wetlands Reserve, Azraq al-Janubi. Excavations at the site, situated to the north of the pool of the now extinct spring of `Ayn Qaysiyya, were carried out in four areas covering a total of 68m2. The excavation project also incorporated palaeoenvironmental research carried out by Dr. Matthew Jones (University of Nottingham), who investigated the sedimentological history of the Azraq marshes and the relationship of environmental change to the human settlement in the oasis. Our project aimed to recover a large sample of artifact data, faunal remains, botanical evidence and associated data to reconstruct the late Pleistocene exploitation of the Azraq marshes in more detail. Most previous research on the early Epipalaeolithic of the Azraq Basin has concentrated on areas adjacent to the oasis, but only one early Epipalaeolithic site (Azraq 17) has so far been excavated in the former Azraq marshes themselves.

The excavation, which was also a field school for undergraduate students from UCL, revealed a series of erosional deposits, which contained abundant Pre-Pottery Neolithic, late Epipalaeolithic and early Epipalaeolithic artifacts and animal bone. The excavation areas A and B revealed an exclusively early Epipalaeolithic lithic assemblage, which was dominated by microlithic stone tools (La Mouillah points, obliquely truncated and backed bladelets, as well as simply backed bladelets). This assemblage was contained within a buried palaeosoil, which facilitated the excellent preservation of faunal remains, including abundant bird and small mammal remains. In Area B we also exposed semi-articulated human remains, which were unfortunately not in situ. Their association with early Epipalaeolithic chipped stone artifacts suggests that they probably date to the same period, but this hypothesis will have to be confirmed by radiocarbon dating in the

General over view of the excavation

Small beads mad of Marble green stone

Rooms (R 1616) From east

Dewilling place (R 1622)

in the eastern wall directly on the courtyard. Even here the stratigraphic situation revealed at least three phases of use: the most recent appears related to the remains of two baked earth ovens, in the SE and NW corners, and an abundance of ashes spread all over the area. A lime floor was discovered attached to the foundations of the walls making us suppose even here the lowering of the floor in respect to the original one of which only traces remained next to the south door and in the NW corner.

The rooms to the SW (R1621-R1622-R1623)

Our excavations proceeded to the SW corner of the courtyard where we excavated two rooms adjacent to the area with the small arches which were partially excavated last year.

The western room (R1621), squarish in form, had two EW arches supporting a ceiling of stone slabs. The plaster on its walls survived through time! The original door opened on the northern wall, while the original floor was only traced in a channel in the NE corner.

To the east of this room stood another dwelling place (R1622) of which we excavated only its southern part. This room had the same characteristics of the adjacent western one: plastered walls, EW arches supporting the roof and plastered niches in the walls. The floor, on the other hand, is made up of stone slabs but with a lime section along the southern wall.

Conclusion

This summer's exploration enhanced our knowledge of the structures around the courtyard. The excavation by the NW corner of the courtyard revealed a solid two storey structure of which we were able to trace the lower floor made up of two adjacent rooms connected by a door with the western one having a partially still standing vault. The relationship of this structure with the courtyard is not quite clear as the two communicating doors seem to belong to a later phase.

Even the buildings excavated in the SW area revealed that they were made up of two storeys. This shows that it was normal to have structures of this type in this area of Umm ar-Rasas. Another characteristic that came out during this excavation is the fact that the second storey of these buildings had large white tesserae floors. The two rooms excavated in this area had common characteristics as the carefully plastered walls, ceilings and niches and a door opened in the southern walls during a later phase. These buildings, in contrast with the other excavated rooms, were not reused after the fall of the walls which most probably took place at one time. Further, the excavated rooms did not have any traces of windows which opened to the outside.

Generally speaking we can conclude that the building excavated during this year's campaign had an evolution corresponding and parallel to that traced in the courtyard. It had a continuous and long life independently from the structural relationships that existed between them.

Further exploration in this area will permit us to understand better the relationship of the buildings surrounding the central courtyard with the courtyard itself. We can already state that in this area, not distant from the main northern gate of the Castrum, there stood a building of considerable dimensions.

Field team: Carmelo Pappalardo, John Abela, Patrik L. Olick, sections drawn by Emma Ferri, Carmelo Pappalardo, plan and designs byEmma Ferri, photographs byMichele Piccirillo, Carmelo Pappalardo.

Umm ar-Rasas

Project Name:Umm ar-Rasas Project
Duration: 1/8-28/8/2006
Number of Workmen: 16
Cost of project:500 JD
Sponsor: Custody of the Holy Land
Director: Michele Piccirillo
Representative: Huda al Kilani

This year's excavation campaign was dedicated to deepen our knowledge concerning the living quarters surrounding the large courtyard which we excavated last year. From the memories of the local inhabitants we came to know that the complex with the large courtyard at its centre was known as al-Dayr or Bayt Umm al-'Asal and also as al-Makhfar – barracks, a name deriving from the fact that a contingent of Turkish soldiers was stationed here (information given by Sultan al-Mur son of the Shaikh in a private conversation with M. Piccirillo).
Initially this year's research was concentrated on the Western area of the complex with the excavation of two rooms towards the NW corner of the courtyard. The second phase included the excavation of the SW area next to the small arches which came to light during last year's excavation in the SW corner of the courtyard.

Rooms (R 16 - 20)

The rooms to the NW (R1616-R1617/20)

The excavation in this area revealed a very intensive modern reuse of the southern section (R1617/20). The large irregular flight of steps belongs to this period, built between the two fallen arches and leading to a still standing room to the south. A capital was discovered while the fill of the area to the west of these steps was being partially removed. The excavations revealed the various phases of these dwellings, all dating to the Umayyad-Abbasid period. The excavation, required by the bad state of the surrounding walls, brought to light a late reuse of the area shown by two baked earth ovens, one of which was almost intact, and an almost even layer of ashes right on top of the fall. In removing the fall some architectonic elements came to light, some of them having traces of red paint under the plaster of which only a few fragments remained. Among these were two finely decorated springers and a small column made up of a capital finely decorated with crosses, a base and two small column shafts. Analyzing the walls of the area one can hypothesize the existence of two storeys both having their roofs supported by arches with the lower arch attached to the pillar on which rested the higher arch.
The second room (R1616) excavated in this area lay to the North of the room described above. Access to it was through a door in the northern wall of R1619 and another

Umm ar - Rasas

Project Name : Roman and later millstones 2006
Duration : 1 day
Number of Workmen : None
Coast of Project : 100JD
Sponsor (s) : University of Southampton and CBRL
Director : DPS Peacock
Representative : Mr Abdul Ra'ouf Tubaishat

Umm ar- Rasas was studied in November 2006 as part of a project to examine the typology and origins of Roman and later millstones in Jordan and Syria. Umm ar Rasas is particularly significant as the stones can be assigned to the Umayyad period. All the mills are of the hour-glass Pompeian type, but they have distinctive features. They are much smaller than those of Pompeii, more cylindrical in shape, and the metas, or lower stones, have a distinctive 'brimmed' wear pattern. These are useful typological indicators for the end of a very long tradition.

Samples were studied petrographically and chemically and initial results suggest that these mills may originate in the basalts of Northern Jordan or Southern Syria. Further work was done on magnetic susceptibility, but this may be less useful. With further work it is hoped to define the point of origin more precisely.

Mills: Cylindrical in shape

wall measures 2.3 meters long, .5 meters wide, and .55 meters thick. It weighs 1100 kg. It dates at least as early as the Iron I period, and could be even earlier. The gate was guarded by at least one pier of stones, restricting access into the passageway. Other architectural means to control entrance into the city will emerge next season.

Head of a female figurine found in Field L, dating to the Iron II period, about 600 BC.

In northwest corner of the site, Field B, the goal was to locate the floors in two northern rooms of a palatial type of structure found in earlier seasons dating to the Late Bronze Age, around 1400 BC. Last season a significant cultic niche was discovered in one of the walls of the largest room of the building. The room measured about 8 meters long by 4 meters wide and contained two doors leading from an entrance room. The team discovered two surfaces, one on top of the other, but only had time this season to remove the thick destruction debris (about 2.5 meters thick) above the upper surface. On this surface and immediately in front of the niche was a small presentation altar encased by a thick layer of plaster. A few crudely made, unfired figurines were found on the floor. Others were found in earlier seasons. The entrance into the building was also discovered this season. Flanked by stones set on their edges, the monumental entrance descended into the building along a series of steps. Just inside the foyer room was a landing and one could choose to go further down the stairs to the surface of the room, or proceed upstairs by turning left and going up to a presumed second story.

Although this very significant building (the best-preserved building from the Late Bronze Age in all of the Holy Land), there is some debate about the precise function of the building. Was it a palace with a shrine or a temple with added rooms? Archaeologists can argue very cogently for either alternative.

In the southwest corner of the site, Field H, the goal was to excavate below a large cobble floor that paved an ancient outdoor sanctuary from the end of the Iron I period (about 1000 BC) where portions of model shrines had been found earlier. The team wondered if an even earlier sanctuary could be found. The answer was no. After about a half meter of rubble, the remains of earlier Iron I domestic dwellings appeared, complete with ovens, bins, and traces of food in the form of bones.

In the southern part of the site, Field L, more remains of a rural domestic structure from the Hellenistic period (about 200 BC) appeared. Partially uncovered in previous seasons, we were able to determine the eastern limits of the complex of rooms and buildings. A long wall separated two parts of the structure and parts of the plaster surface encountered farther west in earlier seasons was discovered, but it soon disappeared in the eastern portion of our field. Below the Hellenistic walls were several walls made of very large boulders, some almost two meters long and a meter wide. These probably date to the Iron I period (or earlier) and probably were from very large public buildings.

Tall al-'Umayri

Project Name: Madaba Plains Project-'Umayri
Duration: June 28 - August 2
Number of Workmen:20
Cost of Project: ID 30,000
Sponsors: La Sierra University in consortium with Canadian University College, Andrews University School of Architecture, Mount Royal College, Pacific Union College, Walla Walla College
Directors: Larry G. Herr and Douglas R. Clark
Representatives: Hanadi Taher and Samar Hababha

The 11th season of excavation took place in 2006 at Tall al-'Umayri, just off the Queen Alia Airport Highway at the Amman National Park, in four fields of excavation. Located near the Amman National Park and boasting the best-preserved buildings from pre-Roman times in Jordan, the site will help complete the history of Jordan from the ages before Petra and Jarash. A number of buildings at the site are the best-preserved structures from their respective periods in all of the Holy Land.

Three of the four fields of excavation were located at the western edge of the site, while the fourth was at the southern edge. Because of its access to an ancient water source, the site was probably along the so-called Kings' Highway. Earlier seasons have produced finds from the EB, MB, LB, Iron I, Iron II, Persian, Hellenistic, Roman, and Byzantine periods, meaning it was more-or-less continuously inhabited from about 3000 BC to AD 600. The site was used for agriculture during the Islamic era while habitation moved to a nearby hill.

In Field A, the central area on the western edge of the site, we hoped to expose the top of the early Iron I destruction (about 1200 BC) west of the later Ammonite Administrative Complex in the eastern part of the field and inside the early Iron I perimeter wall of the site. We removed the poorly constructed walls of a late Iron I room, as well as remnants of earth. As a result the top of the brick destruction from the very beginning of the Iron Age is revealed over a large expanse of area. Moreover, the interior lines of the perimeter wall as it curves into the site are now clearly visible.

Excavation outside the curve of the perimeter wall has exposed the entrance into the city. Made of cyclopean masonry (very large stones), diggers have not yet reached the ancient roadway of the site, but the walls still stand almost two meters above the point where excavation stopped this season. One of the stones in the

Large stones of the gateway into the site in Field A.

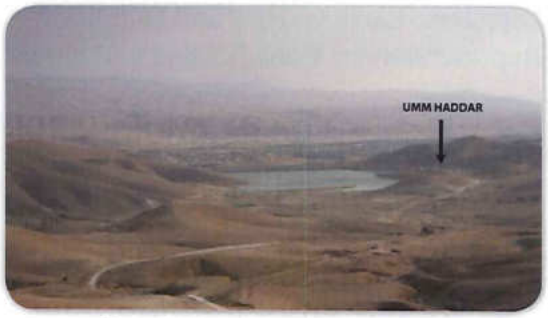
Cultic niche in the palace/temple in Field B with the presentation altar in front.

Stepped entrance into the palace/temple. Note ancient earthquake damage.

Umm Hadar

Project Name: Wadi al- Kafrayn Project
Duration: 3 June – 15 June 2006
Number of workmen: 2
Cost of Project: 2.500 JD
Sponsors: IFPO (French Institute for the Near East), CNRS (French National Centre for Scientific Research), University Paris-1-Sorbonne
Director: Dr. Jean-François SALLES
Representative: Mr Abdelrahim hazim (Abu 'Ala)

The site is located in the lower basin of the wadi al-Kafrayn, or Umm Hadar Plains, about 200m upstream from the Kafrayn Dam. It is a small hill, about 30m high, isolated between the northern ridge of the valley and the stream of the river; its altitude is ca 100m below sea-level.
It was surveyed in the eighties by a British team, and more seriously by Dr. Mohammed al-Waheeb, from the DoA, in 1996, with a preliminary publication in ADAJ 1997. Other surveys were carried on later on by Dr. Chang-Ho Ji. Dr. Mohammed al-Waheeb gives a precise description of the site, with a small fort on top of the hill, about 30 - 40m, and a rectangular building reduced to its foundations at the eastern foot of the hill, where what remains of the plan might suggest a kind of Nabataean sanctuary. Inside the fortress, a few rooms were cleaned out, and a test trench was dug out in the large cistern in the middle of the building.
The pottery recovered by Dr. Mohammed al-Waheeb was mainly Hellenistic and Early Roman, with some complete shapes (lamps, unguentaria, being published by Dr. Fawzi Zayadine); a collection of coins was also gathered in the excavation, still under study.
The French mission in 2006 was mainly devoted to producing a detailed topograhic plan of the site, together with the continuation of the test trench in the cistern. The main results were precise plans of the site.



General view of the wadi al - Kafrayn


Mound Umm Hadar


Small jar


Umm Hadar small fort

Tulul Abu ad- Dahab West (formerly Tulul adh-Dhahab) in the lower Wadi az-Zarqa

Project Name: Tulul adh-Dahab: Interdisciplinary research concerning the fortified central location in the lower Wadi az-Zarqa
Duration: 30 September to 20 August 2006
Number of Workmen: 10
Cost of Project : 21,044 EUR
Sponsors: Dortmund University, Gesellschaft der Freunde der Universität Dortmund, KONE Aufzug Hannover/Germany, Dr. Rüdiger Stolle (Meerbusch/Germany), Dr. Roswitha Batereau-Neumann, Dr. Wolfgang Pola (Fehmarn/ Germany), Monika Riwar (Switzerland), Prof. Dr. Thomas Pola (Dortmund/Germany), Brigitta Knauer (Dortmund/Germany), Dr. Eugen Floren (Marl/ Germany), Wilfried Veeser (Kirchheim/Germany), Arved Leidig (Obernkirchen/Germany), and other private sponsors
Director: Prof. Dr. Thomas Pola, Dortmund University/ Germany
Representative: Khalel Hamdan

Area explored this season: The exploration of the Hellenistic defence construction near terrace IV (Area A) continued at the slope near the 1997 bulldozer cut missing in the map of R.L. Gordon (ADAJ 1983; MDOG 1984). It was shown that the retaining wall and the front wall from sq. 1/2 continue in sq. 4/5. The front wall was excavated until bedrock. The excavation of terrace I (Area F) was concentrated on one of the two peristyle court yards, the top of the adjacent accumulation, and of significant locations in the city walls of the terraces I and II. Geomagnetic prospection was made on terraces I and II, and Area A near terrace IV.
Goals: The dimension and the date of the reused peristyle court yards on the plateau, including the ruins on the top of the adjacent accumulation of stones, had to be investigated. The date of the secondary buildings (possible tower) in the city wall of terrace II had to be explored as it had been already partly unearthed by robbers. The dimension and function of the defence construction next to terrace IV had to be explored.
Most significant monuments in the area or site: There are ruins of formerly splendid buildings on the top of the Western of the Tulul, the above mentioned peristyle court yard. The heart-shape of its tumbled corner pillars (reused, in situ) suggests a date in the 2nd century B.C. or later. The Hellenistic defence construction covering the Western slope is unique in Syria, Palestine, and Jordan.
Tourism Potential: Once the site of the plateau and the defence construction has been completely excavated and if the columns on the top are re-erected the location will gain the interest of tourists interested in Pella, Jarash, or the Dead Sea.
Recommendations: Another season will be necessary to answer the questions that have emerged concerning dimensions and stratigraphy.

Terrace 1 Area F


Terrace IV Area A

In the northern part of the hill, and in trenches P11 - P12 a staircase made of roughly worked stones and a complex of important walls have been revealed, together with LBA/Iron Age pottery, including the upper part of a flask.
The northern part of trench P13 consists of a well-cut rock-floor with two small irregular channels running N - S, whose purpose is unknown. The southern part was much disturbed and produced abundant Iron Age pottery and part of a flask and two small glass beads.
A substantial wall running N - S has been revealed in trench P14 and an Iron Age I big pithoid jar, partly destroyed but standing on its original place was found in the NE corner of the trench.
Work has been continued on trench P15, where a tabun-type bronze smelting kiln was found last year. During this season an effort was made to go deeper and follow the successive layers of habitation on the eastern part of the hill. Abundant LBA - Iron Age I - II pottery has been found, mixed with stones and mudbricks, indicating continuous habitation of the tell from at least the LBA to the Iron Age II.
The new trench V8, opened in the NE side of the hill, specifically on the area cut and destroyed by the bulldozer, produced evidence for at least two successive layers of habitation, dated, on the basis of the pottery found there, to the Iron Age I - II periods.
The overall picture on the top of the tell is now more or less clear, i.e. that an important complex of new important buildings existed there, probably including a stone altar and an open cistern. Access to these buildings was from the NE, through corridors between the retaining wall and the facades of these buildings. A defensive wall probably encircled and protected the inhabitants of the tell.
The presence of some Islamic tombs makes our work there difficult, as they have destroyed some walls and disturbed the habitation layers.
Finally, investigation of the prehistoric cemetery was suspended, as three trial trenches cut among the existing robbed tombs were not productive.
In conclusion, the results of this season at Tall al-Kafrayn were very productive and we strongly recommend the continuation of our project.

sequence from the early Iron Age II until the Early Islamic period. At Tall 'Ammata Iron II and some Late Bronze Age layers were excavated (evidence of Hellenistic and Byzantine occupation was found during the previous excavation season in the year 2005).
Sub-project 3: Geomorphic exploration (Dr. Fouad Hourani)
Geomorphologic investigations were carried out along and in the neighbourhood of the Lower Wadi az- Zarqa Basin as well as the regions around ar-Roweiha, Tall al- Mazar and Abu Sarbut. Those investigations aimed at characterising the palaeolandscape configurations as well as the different types of soils in this part of the Jordan Valley contemporaneous to the Bronze and Iron Age settlements.
It should be mentioned that final results, including this project's potential for tourism, are at the time of writing not available/known.

Tall al-Kafrayn

Project Name: Archaeological Investigations at the Site of Tall al-Kafrayn in the Jordan Vally
Duration: 26 March - 16 April 2006
Number of Workmen: 10-15
Cost of Project: 10.000 Euro
Director : Prof. Thanasis Papadopoulos
Representative:Jihad Harun

As known from our previous reports and the relevant bibliography, Tall al-Kafrayn appears to have been a very important and strategic site, controlling the routes of communications and international trade between the regions of the prehistoric Aegean, Cyprus, Syro-Palestine and the areas to the west bank of Jordan and the inland sites to the east, such as Madaba and Amman. During 2006 our sixth excavation season continued work both on the tell and the adjacent prehistoric cemetery.
First as regards the tell, 16 new trenches were opened on the south, north and east sides of the Tell, while investigation in deeper levels continued in trenches N13 and P14-15, opened last year.
Apart from some architectural remains trench K19 produced parts of burned mudbricks and carbonized wood and abundant Iron Age pottery .
Work on trench L13 revealed a substantial wall, partly destroyed on its western part and continuing to the adjacent trench M12. Another substantial wall, running NE - SW, has been discovered in trench M12, which is interrupted by a third wall running E - W, most probably indicating successive building activities there.
Trench M13 was only partially explored (its eastern part, dim. 1 x4 m.) and produced abundant pottery sherds from its locus 1, belonging to big Iron Age storage jars, as well as the lower part of a jug and traces of a wall running E - W. In the adjacent trench MI5 a structure consisting of two well cut stones, may belong to an altar.
Important architectural remains were also revealed in trench N11 consisting of a stone and mudbrick wall, running SE - NW. Work has been extended from the previous year's partly excavated trench N13 to trench N12, in order to reveal the substantial wall discovered during the 2005 season. Indeed three additional similar walls have been revealed in trench N13, forming a well-designed, rectangular room (dim. 2.30x2.30 m.) belonging to a series of three such rooms on the west part of the top of the hill.
Scanty remains of another wall have been discovered in trench N14, on the centre of the top of the hill. This may be explained as a continuation of the walls found in trench N13.
Trench O11, on the northern part of the hill, revealed stone and mudbrick walls, belonging to an important building, consisting of a room with a platform and a small casing built of upright standing slabs, Finds include pottery, among which the upper part of a flask, stone tools and small objects.
Trenches O12 - O13 have also produced parts of stone and mudbrick walls and pottery of Iron Age I - II.

Tall Dayr `Alla

Project Name: Settling the Steppe Project 2006
Duration: September 11th until November 2nd 2006.
Number of Workmen: 7
Cost of Project: 17000 JD
Sponsors: the Department of Antiquities, the Yarmouk University, the University of Leiden, Netherlands Organisation for Scientific Research (NWO).
Directors:Dr. G. Van der Kooij, Dr. O. Al-Ghul, Dr. L. Petit, Dr. F. Hourani and Ms. E. Kaptijn
Representative: Mr. Hussein al-Jarrah, Mr. Ali Al Owaisi, Mr. Ziad Ghnaimat and Mr. Ashraf al-Khraysheh

The Dayr 'Alla Region is defined here as the area from Wadi Rajib to Wadi az- Zarqa and DamyaThe present fieldwork was carried out within the newly established multidisciplinary project: Settling the Steppe: the archaeology of changing societies in Syro-Palestinian drylands during the Bronze and Iron Ages. Twenty scientists, with different disciplines and fields of specialisation, were invited: fourteen from the University of Leiden and six from the Yarmouk University. The main goal of the project is to connect the kinds and periods of use of the total landscape with the history and character of use of Tall Dayr 'Alla and explain the varieties of use through ecological and social/political factors, with a focus on the Iron Ages. Comparison will also be made with a similar situation in northern Syria.

Sub-project 1: Landscape survey (Ms. Eva Kaptijn)

The third season of archaeological landscape survey focussed on the area to the West of Tall Dayr `Alla. Small artefact scatters dating to the Early Bronze Age were discovered in addition to more substantial surface concentrations dating to the Byzantine and Mamluk periods. A second area of attention, located close to the Zarqa near the village of Tiwal, revealed pottery distributions from the Early Bronze Age, the Roman, Byzantine and Islamic periods, in addition to more limited numbers of Late Bronze and Iron Age pottery. The large number of sherds dating to several different periods evidences the intensive use of this area during a prolonged period of time.

Sub-project 2: Tell survey and soundings (Dr. Lucas Petit)

Two sites were studied, because of their relevant location, high availability of Iron Age material and degree of recent destruction/damaging: Tall 'Adliya and Tall 'Ammata. The first revealed a complete chronological

Excavation work at Tall 'Ammata

Jar handle impression found at Tall 'Ammata

Excavation at Tall al- 'Adliya

distinct dolmen groups, in which some dolmens are clustered along a shared common terrace wall. The distribution of recovered artifacts and buried features indicates that commemorative practices were carried out around and between "clustered" dolmens, yet such practices were restricted to the immediate vicinity of individual dolmens that do not share a terrace wall. All dolmen groups in the as-Salam survey area are associated with stone circles or stone alignments, and are marked by low standing stones (Fig.4). This illustrates that such fields were shaped by commemorative practices that can be linked to a mosaic of features. This highlights the view that dolmen fields are extensive and vital archaeological sites.

Fig .4 : Minhir 79, Area D

The first attempt to carry out this type of archaeological investigation at a dolmen field has yielded important information for future dolmen studies. The preliminary season of the as-Salam Archaeological Project demonstrates that the spatial analysis and excavation of such sites can assist in revealing the intertwined histories of dolmen fields and Early Bronze Age social groups. Analytically and conceptually this serves to establish possible links between dolmen field practices and the dynamic social context of Early Bronze Age village life. Such an understanding provides insight into how remaining dolmen fields might be reconstructed and transformed into protected archaeological sites. The preliminary season at as-Salam determined that a long-term excavation and conservation project is feasible. Unfortunately, the larger dolmen area, which includes the as-Salaam field, is in danger of being destroyed by housing development and road construction. In fact, destruction of all dolmen fields in Jordan has increased rapidly in recent years. As a result, dolmen field research has assumed critical importance. As this project demonstrates, such fields are unique places in the landscape and are a vitally important part of Jordan's history.

Towards this end, we intend to return to the a-salam dolmen field to broaden our present archaeological investigation, in order to work towards saving a unique part of Jordan's heritage. Our goal for future seasons is further excavations and partial restoration of the field. This will enable visitors a unique opportunity to experience the inherent beauty and wonder of the dolmen landscape. This will serve to boost the thriving tourist industry in Jordan by drawing in large numbers of tourists who express a keen interest in visiting monumental landscapes.

Ar - Rawda Dolmen Field

Project Name:Investigations Uncover Past Dolmen Field Practices
Duration: June 16, 2007 (4 weeks)
Number of workmen:5
Cost of Project: $10,250
Sponsor: Binghamton University, State University of New York, the Samuel H. Kress Foundation, the American Center of Oriental Research, and the Council of American Overseas Research Centers
Director: Lucy Ann Clayton
Presentative : Rami Freyhat

Recent archaeological investigations have unlocked more secrets of Jordan's little known ancient monumental landscape, dolmen fields.

A team of archaeologists carried out a spatial analysis of dolmens, stone circles and stone alignments, and excavated a series of test units for the first time across the as-Salam dolmen field. (Fig.1). This archaeological investigation enabled them to discover evidence of Early Bronze Age dolmen field commemorative practices.

As-Salam is located immediately northeast of both the modern Jordan Valley community of ar-Rawda and the Early Bronze Age site of Tall Hammam (Fig.2). This preliminary season of archaeological investigations at a-salaam dolmen field is part of the a-salaam Archaeological Project (ASAP).

The as-Salam dolmen field is part of a larger dolmen area (Fig.3), in which J. Swauger carried out archaeological investigations in 1962, followed by R. Da`jani in 1967, K. Prag in 1991, and Z. Kafafi in 2005. Past investigations in this large dolmen area have been limited to mapping, excavating individual dolmen, and collecting bits of pottery scattered across the surface. A full account of their work is available in Archaeology, ADAJ, Levant, and Mediterranean Archaeology and Archaeometry.

Though human remains and intact artifacts are rare, excavated materials in other dolmen fields from this time are associated with burials, such as the disarticulated skeletons and EBA pottery found inside a tomb chamber beneath a dolmen at Damiyalocated in the middle Jordan Valley. This could indicate that dolmen fields were places where the dead were commemorated, a theory backed by the many burial caves found near dolmen fields.

The spatial analysis of dolmens, stone circles, and stone alignments, and their association with specific geographic features and artifacts recovered between dolmens has opened up a whole new way of seeing dolmen fields. The team created a feature map that provided an image depicting the field as a series of

Fig .1 : Area E Dolmen test units

Fig .2 : Relationship of Dolmen filed to Tall Hammam

Fig .3 : Stone circles line up to highest hill and are in view of Dead Sea

Tall Abu as-Sawwan

Project Name: Tall Abu as-Sawwan Project
Duration: 24/6-20/8/2006
Number of workmen: (70 students)
Cost of Project: 6500 JD
Sponsor: Jordan University /Department of Antiquities
Director: Dr Maysoon Al-Nahar
Representatives: Mr. Mousa Malkawi

Tall Abu as- Sawwan is located to the east of the Jarash `Amman high way just before the turn to `Ajlun. Because of the enormous number of lithics laying on the surface, the site has been surveyed by many researchers in the last few decaddes. The University of Jordan conducted its first field school at the site in 2005 under the direction of Dr. Maysoon Al Nahar. In the 2006 summer, the University of Jordan conducted its second season of excavation.

Tall Abu as- Sawwan comprises a unique squared structure with parallel interior walls. The excavations revealed three clear floors of white, yellow and red plaster. These indicate that the site has been occupied many times. The lithic tools, structures, and the different features found at the site demonstrate that Tall abu as-Sawwan was occupied in the Pre Pottery Neolithic B and Yarmoukian periods. This site is one of the mega Pre Pottery Neolithic B sites in Jordan. Few PPNB sites have been found north of the Zarqa River during the different surveys conducted in the area and Tall abu as- Sawwan is the only site PPNB site excavated in this area.

A large lithic assemblage with diagnostic tools was uncovered from the site including, scrapers, different types of cores and several different types of points including Jericho, Byblos and Amuq arrowheads.

General over view of the site

Tetrakonia Piazza in summer, 2002. A further, smaller season was undertaken in 2003, a large double season in 2004, and a standard season in 2005.

Most significant monuments in the area

The work concentrates on the main (Friday or Congregational) mosque of Jarash dating to the Umayyad period (41-132 H/661-750 CE), most probably constructed under Hisham ibn Abd al-Malik (r. 105-125 H/724-43 CE) as the centre-piece of an urban renewal program at Jarash, a provincial capital of the Jund al-Urdunn. Predating the mosque was a bathhouse, also being investigated.

Results

In 2006, more major features belonging to the Umayyad mosque and related structures were exposed (Figure 1). Work focused on two ten by ten metre squares located at the southwest end of the prayer hall.

Fig .3 : View over the staircase and shops

These excavations revealed:

a) The full east-west extent of the mosque, especially the important qiblah wall

b) The west enclosure wall of the qiblah hall was fully exposed and an independent staircase from the west investigated (Figure 2);

c) All the remaining architectural features of the qiblah hall were revealed;

West of the mosque, an area with a small street and adjoining buildings was further investigated. It was suggested last season that these structures were service buildings, with evidence of the preparation or manufacture of goods, and this appears to be correct.

East of the mosque further excavation of the shops flanking the cardo was undertaken (Figure 3). These shops formed an integral part of the mosque complex, perhaps providing income to support the many activities expected at a new social centre for Jarash after the arrival of Islam.

The 2006 season also continued the investigation of the late Roman bathhouse that existed in this area before the construction of the mosque. Further investigations were conducted into the large pool with benches for sitting in cooling waters (the frigidarium).

Further detailed planning of the paved streets to the north and east of the mosque was undertaken in the 2006 season. This part of the project has reached an advanced stage, with the whole area from, and including, the south Tetrakonia plaza to the west and south being fully recorded.

Recommendations

Plans are underway to restore the mosque as a positive visual record of early Islamic settlement at Jarash.

Jarash
Project Name: The Danish–Jordanian Islamic Jarash Project
Duration: 30 July – 25 August 2006
Number of workmen: 40 staff, 30 workmen
Cost of Project: (in-field) JD 10,200
Director: Professor Alan Walmsley, Carsten Niebuhr Institute of Near Eastern Studies, University of Copenhagen, Denmark
Representative:Aktham Al-`Abadi

Historical background

Jarash is one of Jordan's major archaeological and tourist sites, noted for its Roman-period and Byzantine-period archaeological monuments. Included among these are huge temples, theatres, and open public spaces, especially the famous 'Oval Piazza' in front of the Zeus temple, plus its many churches, often decorated with brilliantly colored mosaics. At the time of the Islamic Conquest of Bilad al-Sham (635–640 CE), Jarash surrendered without destruction to the city. Social and economic life continued, and a large mosque was built in the center of the city, as discovered last year by our project.

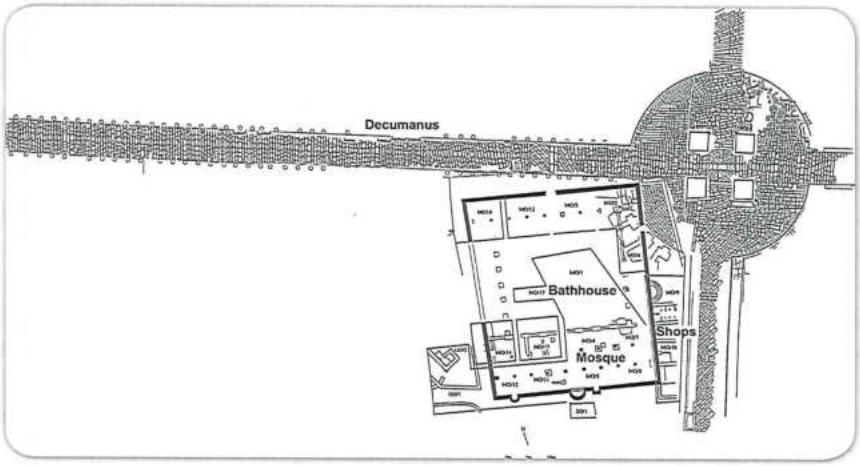


Fig .1 : New plan of the Umayyad mosque of Jarash

Tourism potential

Jarash is a well known tourist site, but not for the Islamic periods. The Islamic Jarash Project plans to change that by systematic excavation and restoration of a number of major Islamic monuments, including an early mosque, located around the south crossroads of the Roman-period city.

Area explored this season

The Summer 2006 season of the Danish-Jordanian Islamic Jarash Project had as its objective the continued excavation and recording of the large Early Islamic mosque discovered in the southwest corner of the

Fig .2 : View over the qibla hall of the mosque

Wadi ar-Ruwayshid area

Project Name: Archaeological surface investigation in the Wadi ar- Ruwayshid area. Spring 2006
Duration: Feb. 11 – Feb. 16, 2006 (6 days)
Number of Workmen: None
Coast of Project: 1000 JD
Sponsors: German Archaeological Institute Orient Department (DAI)
Directors: Prof. Dr. Fawwaz al-Khraysheh (DoA) and Prof. Dr. Ricardo Eichmann (DAI)
Dr. Bernd Mueller-Neuhof (DAI) Team: Bernd Müller-Neuhof
Representative: Hussein Askar

This project is part of a long term joint project between the German Archaeological Institute Orient-section (DAI) and the Department of Antiquities (DoA) exploring traces of human activities, especially trade and communication networks in the arid regions of northeast Jordan with a chronological priority on the Chalcolithic and Early Bronze Age periods.
The work focussed on the documentation of a large quarry site (RU 27) on an elevation in the Wadi Ruwayshid area (N 32°29'16"; E 038°30'46"), which was discovered in 2000 by Ricardo Eichmann (DAI), Salem Diyab (DoA) and Bernd Mueller-Neuhof (DAI). This site is characterised by large areas covered with thousands of flint nodules bearing negatives of fan-scraper blank production, which was carried out on the site. Approximately 100,000 fan-scraper blanks were produced here.
Fan- or tabular-scrapers are type-fossils of the Chalcolithic and Early Bronze Age (c. 5000-3000 BC), therefore these flint working sites probably fall into this period. Beside RU 27 two other sites (RU 28, RU 29) of this type have been found in the closer vicinity also on the summit of higher elevations. Quarry sites like these were discovered the first time a few years ago in the Jafr basin in Southern Jordan. The sites in the Ruwayshid region are the first known outside the Jafr region.
Because fan-scrapers were very important tools in the these periods, found in almost all Chalcolithic and Early Bronze Age settlements in the Levant and Syria, the discovery of sites like these in the Ruwayshid region is of high importance for the reconstruction of economic activities in the arid regions and prehistoric trade routes. This is particularly so as sites like these are unknown west of the Jordan River despite intensive surveys in those areas. A continuation of this project in a larger framework is planned for the future.

Khirbat as-Samra

Name of the Project: Khirbat as-Samra Ancient Cemetery- 2006
Duration: 8/ 6-7/7/2006,(30 Days)
Nomber of workmen: 10 per day, 18 total.
Cost of Project: 2800 JD
Sponsor: Abteilung Humanbiologie and private donations.
Director: Dr. A. Nabulsi- Abteilung Humanbiologie – Fachbereich Biologie,University Hamburg
Allende-Platz 2 , D-20146 Hamburg.
Representative: Mr. Jamil Masaeed, Mafraq Office

During this season, 45 tombs from Site A1 of the Khirbat as-Samra ancient cemetery were excavated in the period between 08.06-07.07.2006. Most burial were found disturbed. Some fine objects were retrieved, including a basalt cocking pot, glass bowel and plaster mirror frame. Besides confirming previous results, the work provided evidance on the variations in tomb architecture, burials density and the dating of the cemetery in general.
Fig.1- General view of the excavated A1 site at the Khirbet Es-Samra ancient Cemetery.
Fig. 2. Tomb-310 with a 3rd century AD glass bowl to the right of the skull.

Kh.as Samra :site A1

Kh.as Samra :tomb 310

Jawa

Project Name: Water Life & Civilisation Reconstructing Bronze Age population levels at Jawa
Duration: 20 April 2006
Cost of project: 180JD
Sponsor:University of Reading, Council for Britihs Research in the Levant, Leverhulme Trust
Director: Prof. Bill Finlayson (CBRL) Dr Sam Smith (University of Reading).
Representative: Nasr Khasawneh

This fieldwork was undertaken as part of the Leverhulme Trust funded Water Life & Civilisation Project (www.waterlifecivilisation.org), based at the University of Reading UK. This large, interdisciplinary project has several aims, one of which is to examine the link between climate change, water availability and patterns of human settlement. One aspect of this study has been to examine the potential role of climate change on water availability during the Early Bronze Age at the Bronze Age site of Jawa. This work involved using cutting edge Global Circulation Models as well as fine grained palaeoclimatic records to develop an understanding of Bronze Age climate. This data was then used to drive a hydrological model of the Wadi Rajil- providing us with estimates of the amount of water available to the Bronze Age inhabitants of the site. We then used Monte Carlo modelling to relate climate driven changes in water supply to potential population levels during the Bronze Age. The results of this work suggest that Jawa would have been very susceptible to mid Holocene climatic variability and that this vulnerability may account for the abandonment of the site. The initial results of this work in currently being prepared for publication as:

P.G. Whitehead, S.J. Smith, A.J. Wade, S.J. Mithen, B.L. Finlayson , B. Sellwood & P Valdes. In Press. Modelling of Hydrology and Potential Population Levels at Bronze Age Jawa, Northern Jordan: A Monte Carlo Approach to Cope with Uncertainty. Journal of Archaeological Science.

The fieldwork involved a tour of the site which proved invaluable in allowing members of the team to understand the archaeology and ecological setting of Jawa.

different types of things.
Discovery of caves of this nature in Jordan is extremely exciting. Finds from caves like this in Palestine are currently displayed in major state museums and have become important tourist attractions. There is growing consensus that these cave burial sites are far more common than had been previously imagined. The rapid pace development in Israel/Palestine has increased the rate of excavation of these sites. In addition, there is a tradition of adventure caving in Palestine that is not paralleled in Jordan, which has meant that caves are not explored very much in Jordan. We know, however, that we have the same geological formation and the same vegetation on the Jordanian side of the valley. There is every reason to suspect that further rich Chalcolithic cave burial sites exist in Jordan, but that these have not yet been located or recognised.

Dr. Alex Wasse excavates the objects from RL53

Dr. Jamie Lovell cleans the objects from RL53

Department of Antiquities of Jordan 45: 61-70.

Northern Highlands Zone

Project Name: Ritual Landscapes Project

Duration: 6 weeks (Nov-Dec 2006)

Number of Workmen: None

Cost of Project: 3582 JD

Sponsor: CBRL

Director: Dr Jaimie Lovell

Representative: Najih Abu Hamdan

Discovery of Chalcolithic copper axes in cave in Jordan:

Recent survey by the Council for British Research in the Levant (CBRL) has revealed the first ever evidence for a Chalcolithic cache in a cave site in Jordan. While these sites are known from the western side of the Jordan River (e.g. the famous 'cave of the treasure' or Nahal Mishmar) this is the first find of its kind in Jordan.

The CBRL team consisted of expert cavers and archaeologists who scoured the landscape for known and unknown caves. The project director, Dr Jaimie Lovell, and the Department of Antiquities representative, Mr Najih Abu Hamdan, carefully quizzed local people in the Wadi ar- Rayyan and Wadi Kufranja drainage systems for clues as to the whereabouts of caves.

In their survey the team looked at over 120 caves in a period of 6 weeks. An 'active' karstic cave was located in the Wadi ar- Rayyan that contained two [presumed] copper objects. This cave has been well protected from exploration because access involves crawling through a tight squeeze through to an area with 'bad air' and a colony of bats. The copper objects were immediately visible because they were sticking out of the side of the passage, and it the process of decay they were bleeding green onto the surrounding rock.

Special permission was sought from Ibrahim Zoubi (Inspector, `Ajlun District) to remove the objects for the purposes of conservation. This was granted on 27/11/06 when Mr Zoubi visited the site, after which the objects were removed and a basic conservation programme was begun. Post conservation it appears that the objects correspond to copper objects found in the 'Cave of the Treasure' in the Judean Desert. This makes their discovery particularly important – they are the only examples of materials of this kind stored in caves in Jordan. The cave is still an active cave today – it is wet and damp and unsuitable for habitation. It is most unlikely that this cave would have been used for anything other than storage or as a depository for the dead. Small niches in the sides of the passages showed evidence of human bone, and other finds of groups of polished stones suggest that the area was a repository for many

Henry Rock ciliff Surveys the «squeeze» in cave RL53

Ibrahim Zubi inspects the objects in situ RL53

few have burnished surfaces. Where form is evident, cups, bowls and small and medium-sized jars appear common. These sometimes have small ledge handles or larger loop handles, and usually flat, disk bases.

The Neolithic faunal remains from the site show that sheep and goat were the most commonly husbanded animals, but there is also evidence of cattle and pigs, while a few remains of deer and gazelle suggest that hunting sometimes supplemented the inhabitants' mixed-farming economy.

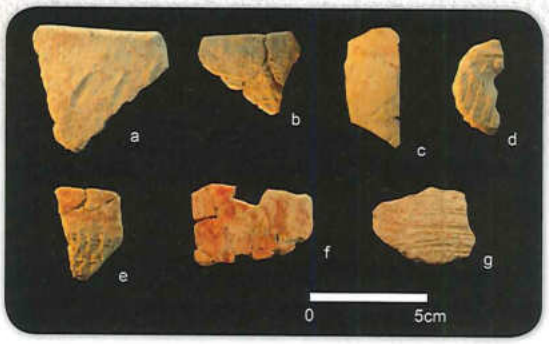


fig 4 : Lat Neolithic Pottery

The Early Bronze I occupation at the site appears to have been a hamlet or small village. Our excavations in 2004 had uncovered part of a round-ended (apsidal) house along with parts of rectangular buildings. Our 2006 excavations augmented our sample of pottery, stone tools, and faunal remains of this period. As in the Late Neolithic, the site's focus appears to have been on farming grain and raising sheep and goats. Pottery consists of many large jars along with some finer bowls. Fabrics are predominantly grey, brown, or yellow, often with dark cores and very coarse temper. Pottery decoration is rare and simple, and most often consists of a row of oblique slashes or incisions just below the rim. The excavations found no band-slip or "grain wash" sherds. The stone tools are usually quite simple, and include sickle blades and simple scrapers.

Al-Basatîn provides new evidence for the poorly-known transition from the Neolithic to the Chalcolithic in Jordan. It also adds to our knowledge of the earliest small settlements of the Early Bronze Age.

References

Banning, E. B., D. Rahimi, & J. Siggers 1994. The Late Neolithic of the southern Levant: Hiatus, settlement shift or observer bias? The perspective from Wadi Ziqlab. Paléorient 20: 151-64.

Banning, E. B., K. Gibbs, and S. Kadowaki 2003. Al-Basatîn. American Journal of Archaeology 107: 454-456.

Banning, E. B., K. Gibbs, M. Gregg, S. Kadowaki, and L. Maher 2004. Excavations at a Late Neolithic site in Wadi Ziqlab, northern Jordan. Antiquity 78.

Maher, L., & E. B. Banning 2001. Geoarchaeological survey in Wadi Ziqlab, Jordan. Annual of the

Al-Basatin (WZ 135), al-Kura District

Project Name: Wadi Ziqlab Project
Duration: 3 June to 6 July 2006
Number of workmen: 6 foreign team members, 2 department representatives and 7 local workers
Cost of Project: JD 3600
Sponsor: University of Toronto and Social Sciences and Humanities Research Council of Canada
Directors: E. B. Banning, Kevin Gibbs, and Seiji Kadowaki
Representatives: Abd ar-Raouf Tabishat and Firyal Bani 'Isa

From 3 June to 6 July, 2006, a Canadian team from the University of Toronto conducted excavations at al-Basatin in Wadi Ziqlab, al-Kura, northern Jordan. The excavations uncovered evidence for occupation of the site in the Late Neolithic (ca. 5500 BC) and the Early Bronze I (ca. 3500 BC). The research at this site contributes to a better understanding of the transition from the Neolithic to the Chalcolithic, an aspect of Jordan's late prehistory that is relatively poorly understood, and when farmsteads appear for the first time to have supplemented aggregated villages. They also provide evidence for a type of small Early Bronze village, with round-ended (apsidal) houses at the very beginning of the Early Bronze Age.

The site is on a broad, sloping terrace (figure 1) about 25 m above sea level, immediately across from the important Classical site of Tall Abu al- Fukhkhar, in a part of the valley where numerous springs feed a perennial stream with several waterfalls.

This season's excavations uncovered a number of Neolithic architectural features, including portions of house walls and more of one of the cobbled floors that had previously been found. Interestingly, these cobble floors (figure 2) do not appear to have been associated with walls, and may have been the floors of tents or other impermanent structures, similar, perhaps, to the plaster floors without walls at Byblos in Lebanon of similar date.

Neolithic artifacts from al-Basatîn (figure 3) include sickle elements, usually serrated with deep denticulations on the cutting edge. Other stone tools found at the site are scrapers, perforating tools (awls), and milling stones.

The Late Neolithic pottery is crudely constructed, probably by coiling, and poorly fired, yet occasionally shows expressive surface treatment (figure 4). Although decoration is rare, the most common decoration consists of combed or roughened surface. A few sherds had punctate decoration, in one case combined with combing. Other sherds show traces of red or black slip, and a

Fig .1 : General view of the site

Fig .2 : The cobble floors

fig 3 : Neolithic artifacts

Wadi Natifa

Project Name: Bioarchaeology of North Jordan
Duration: May 21 - June 15, 2006
Number of Workmen:7
Cost of Project :7210 JD
Sponsors: University of Arkansas, USA and Yarmouk University, Jordan
Directors: Jerome C. Rose and Mahmoud El-Najjar
Representative: Woroud Samarah

The goals of the Bioarchaeology of North Jordan project are to: (1) reconstruct the health and diet of rural Roman - Byzantine villagers; (2) refine our knowledge of the architectural variation in tomb construction; and (3) contribute to our understanding of the rural economy as it impacts on the lower social classes. Wadi Natfa was visited by our team in July 2005 to assess its potential for achieving our goals. Meeting our needs, the site was selected for conducting the 2006 field school.

Excavation focused on a single row of horizontal shaft tombs along the east side of the wadi. Of the tombs in this row, 23 were excavated. In addition to these there were many robbed tombs evident. The entrances were cut through hard limestone into the softer rock below, leaving the hard rock as the roof of the tomb. All of these tombs had been robbed in recent times except one, which had been robbed in ancient times, with the door replaced and the bones piled neatly at the end of the tomb. Osteological analysis indicates that these tombs were primarily for single adults. Thirteen tombs had only adult remains, with only two being sexed, one male and one female. One tomb contained only a single 10-year-old juvenile. One tomb contained four subadult individuals: 0-6 months, 2-3 years, 5 years, and 11-15 years. No osteological evidence of disease was found, although one person had suffered four episodes of childhood stress/disease.

In the row below, two of the many robbed tombs were excavated, to reveal an interesting tomb type. These horizontal shaft tombs had an entrance cut as those above but the tomb chamber was only 1 meter deep and 40 cm wide. If a body were placed in these tombs, the feet would extend beyond the covered portion. This tomb type deserves more attention and future excavation.

A large horizontal chamber tomb on the west wall of the wadi was also excavated. This tomb had been extensively robbed and production dates on the food packages left by the robbers indicate robbing as recently as January 2006. This tomb had a nicely carved door and doorway, all destroyed. The chamber has 12 loculi, 2 stone-cut graves into a benchlike shelf, and 1 sarcophagus. Bone and teeth indicate a minimum number of 13 individuals including 8 adults (including 1 male and 1 female) and 5 subadults (birth, 6-18 months, 2-3 years, 6-12 years, and 12-15 years). No disease or nutritional deficiencies were found.

Further excavations were also conducted in the most western squares. The remains of three houses dating to the Middle Bronze Age came to light.
Besides about 25.000 pottery sherds. the most interesting finds are two clay figurines of fertility goddesses. the basalt head of a god or a notable. two cylinder seals of the Mitanni Common Style. a scarab and various bronze objects.
A second area (Area II) was opened on the north side of the tell. This place is slightly higher than the other parts of the tell except the southern area. It is well protected in the north by the steepness of the slope. Buildings of great importance can be expected here due to its raised position. Five squares – each 5 m x 5 m – were opened. The walls of a house surrounding a large courtyard with an entrance in the east were uncovered. They can be dated to the Roman-Byzantine period. Underneath. walls of an earlier building with a completely different orientation could be traced. They belong to the same general period. Pottery sherds. three complete oil lamps. sherds of glass vessels and some coins were recovered.
The excavation shed light on the settlement and economical history of the Gadara region from the Early Bronze Age to the Islamic period and is one of the few examples with such a long range of stratigraphy in northern Jordan.

Tall Zar'a

Project Name: Gadara Region Project
Duration: 20th March – 22nd April 2006
Number of workmen: 22 students, architects and surveyors, 8 Jordanian workmen, 34 volunteers
Cost of Project: 4,250 JD
Sponsors: Evangelische Kirche Deutschlands, Biblisch-Archäologisches Institut Wuppertal, Hugo-Gressmann-Stiftung
Directors: Prof. Dr. Dieter Vieweger, Dr. Jutta Häser
Representative: Amjad Bataineh

The „Gadara Region Project" was initiated by Prof. Vieweger in the year 2000 to investigate the surroundings of the ancient Decapolis city of Gadara – a major field of German research since the late 1960s. After two years of intensive surveys in the Wādī al-'Arab and Wādī az-Zahar it turned out that Tall Zar'a is the most promissing site for excavation. This tell is situated 4.5 km southwest of Gadara/ Umm Qays at the confluence of the Wādī al-'Arab and Wādī az-Zahar. The archaeological surveys and geo-electrical prospections showed that the site was inhabited from the Early Bronze Age till the Islamic period. The natural hill is covered with cultural layers of 6-9 m thickness. After a trial excavation in 2002 conducted by Dr. Karel Vriezen. the first excavation campaign was carried out in summer 2003. It was directed by Prof. Dieter Vieweger. Since 2004 the project has been a co-operative project of the Biblical Archaeological Institute in Wuppertal and the German Protestant Institute of Archaeology under the direction of Prof. Dieter Vieweger and Dr. Jutta Häser.

Area I at the northwestern slope of the tell was extended to the south by four squares. each measuring 5 m x 5 m. The deepest trench was excavated to a depth of 4 m. The excavation continued in twelve of the previously opened squares. All in all the excavation now covers an area of 775 m^2 in Area I.

The continuation of the Roman-Byzantine occupation to the south could be clarified in the newly opened squares. In two of the squares the Iron Age II levels were reached and showed the remains of a house.

The previously opened squares were dug down to the Iron Age I level or to the Late Bronze Age level. Many details of the construction of the houses and the layout of the Iron Age II and Iron Age I settlement became more elaborated. In one of the houses a workshop for metal-working was excavated. The remains of a melting-pot will be analyzed in the Deutsches Bergbau-Museum.

General view of the excavation / Area 1

Overview of the excavation / Roman - Byzantine house Area II

fields: SV (the historical village on the hills flanking Wadi Saham) and SW (Wadi Saham proper with its gardens and lower terraces). The survey of SV focused on identifying, dating, and recording the abandoned farmhouses and associated complexes of the village. A variety of farmhouses in Saham were targeted, in an attempt to survey a selected sample of structures in the village and document a representative sample of domestic spaces. In total, seven farmhouse complexes were identified. In addition, project staff conducted a detailed study of the old village mosque, which was built sometime in the late 19th century C.E. and used as a place of worship until the 1980s.The purpose of the walking survey of Wadi Saham was to document contemporary land and water use and to look for evidence of past land and water use systems, specifically from the Mamluk, Ottoman and Mandate periods. Three sites of agricultural significance were fully explored by foot for a distance of 2.5 kilometers and documented: 'Ayn Saham, with its spring house; a cave and water harvesting system; and the wadi floor, today dedicated to citrus and olive groves. Soil and water samples taken during the survey will be analyzed in labs to determine what crops were planted in historical periods and how the physical environment was altered from the 13th century C.E.

The project moved to Hubras, a village 15 kilometers northwest of Irbid, for two weeks of excavation from 25 June to 8 July in two fields located on the modern road to 'Ayn Hubras: Field A (the two historical mosques in the old village center) and Field B (the abandoned farmhouse of Muhammad Ahmad Saleh 'Obeidat, one of the oldest standing farmhouses of the original village). Four small probes in the interior of the two Field A mosques and two trenches in the north doorway of the larger mosque and outside its east wall produced a ceramic and architectural sequence from possibly the Umayyad period until today. A small mosque with one mihrab and a black and white mosaic floor probably stood on this site as the original place of worship. It appears to have been enlarged in the thirteenth century, to accommodate a village population that had grown significantly in size: a second mihrab was added, the mosaic floor replaced with a flagstone pavement, and piers added to a system of preexisting columns to support a series of cross vaults. Excavation revealed a large flagstone pavement outside and to the east of this mosque, built sometime in the sixteenth century, the purpose of which is unclear. In 1931 a new, and much smaller, sanctuary was built in the courtyard of the ruins of this structure, and the older courtyard used as the village kuttab until the 1960s. The space to the east of the older mosque was used domestically, as walls of late nineteenth or early twentieth centuries, interrupting the exterior pavement indicate.

Field B was selected for excavation because of its age and state of preservation. The goal of the study was to identify, date, and record the abandoned farmhouse and its associated complexes; to look for stratified deposits to better refine the chronology for Ottoman and Mandate period ceramics; to access the building sequences of structures within the complex; and to examine household economic patterns by examining ceramic, lithic, faunal, and other associated midden deposits. The excavation produced an occupational sequence that represents the history of the village from the 1940s until today.

Saham and Hubras

Project Name: Northern Jordan Project 2006.
Duration: 14 June to 8 July 2006
Number of Workmen: 0
Cost of project: 6958 JD
Sponsor: Department of History, Grand valley State University
Director: Dr Bethany J Walker
Representative: Asma el-Zubda

The Northern Jordan Project is a multidisciplinary exploration of the history of rural society, agriculture, and the physical environment of northern Jordan from Irbid to the Yarmouk River, with a focus on the Mamluk and Ottoman periods. The units of study each season are individual villages and their hinterlands; fieldwork is preceded each year by extensive archival research by the project director. The inaugural season in 2003 consisted of archaeological, ethnographic, and environmental surveys of the village of Malka and a brief architectural study in the village of Hubras. The second season of the NJP focused on the villages of Saham, where we conducted a two-week surface survey and intensive architectural study, and Hubras, the location of a two-week excavation, during the period 14 June through 8 July 2006. The goals of the 2006 season were three-fold: (1) to assess the role of environmental change in the settlement fluctuations of the medieval and early modern periods; (2) to develop a typology of vernacular architecture for the Mamluk, Ottoman, and Mandate periods in northern Jordan, both domestic and sacred; and (3) to evaluate transitions in and out of market-based agriculture on the social, economic, and political levels. This season the team consisted of 22 members from Grand Valley State University (the financial sponsor), Calvin College, Yarmouk University, and Brandenberg University of Technology in Germany and was a collaboration with the Jordanian Department of Antiquities and Wazarat al-Awqaf. The Municipalities of al-Shoulla and al-Kfarat provided much logistical support.

The survey of Saham, 20 kilometers northwest of Irbid, was conducted from 14 June to 23 June and was a multi-dimensional survey of two

Saham mosque

A flagstone pavement

flooring of which had been protected via soil coverage in earlier seasons, was cleaned for final photographs (see attached crane-shot photo). This reminded all of the beautiful opus sectile and mosaic flooring still intact in sections of the church. At the end of this season, the mosaic flooring was secured by members of the Department of Antiquities, all flooring was covered with sand, and further revised restoration was executed to better preserve the walls of the church.

The Area DD church to the west of Area D was largely defined from prior years. Exterior squares were opened which revealed a complex pattern of walls outside the church itself. These walls were often parallel to the walls of the church itself, though they do not seem to indicate attached structures from the era of the initial founding of the church. One wall was noticeably built on top of an intact pottery vessel, while another wall was founded on top of a series of large basalt pieces (likely from lids of sarcophagi).

Large black marble object
(preliminarily identified as a reliquary)

The Area E church is located below the saddle of the two main tells and on the way to the Roman bridge. This five-aisle church with its three apses was known from before, along with its western portico. However, further investigation to the west of the portico revealed a large cistern, nearly six meters deep (see photo). This cistern was fed through at least one drain down the side of the retaining wall-further to the west. This retaining wall also exhibited a plaster decoration and an alcove. The threshold in the southwest comer of the Area E church was investigated, revealing a large attached room which exhibits both primary and secondary usage. In the room was a large black marble reliquary (see photo), a very large bowl-shaped object (perhaps a baptistery) with a curious hole in the bottom, and a curved exit to the east of the room. Through this exit was discovered another paved area along with an intact chancel screen post.

Four squares had been exposed in earlier seasons from the Area G church to the east below the summit of Umm al-`Amad. Based on these the initial assessment of this structure was that it was a small one-apse chapel. However, as the season progressed and as more manpower resources were brought to the task, the magnitude of this church surprised all. It clearly represents a three aisle structure with narthex and likely attached rooms to the north and south. To the north, below the remains of this church, is strong evidence of archwork over a large continuation of one of the famed water channels of Abila; this likely provided support above for adjacent architecture to the north of the church itself. Fragments of marble flooring atop plaster were evident throughout the interior of the church, and exterior walls evidenced hangers for an interior vertical marble facade. This church's single apse design with pier-support of the central nave is reminiscent of other Byzantine churches in northeast Jordan; yet it also has a distinctive large ambo platform used for reading holy scriptures. Probes beneath the ambo and in foundation trenches consistently report early and late Byzantine pottery.

As a small side note to our central goals, in collaboration with the German soil scientist, Bernhard Lucke, two probes were made in order to sample soil layers in the wadi bed adjacent to the Roman bridge below the main city. The size of the bridge was made more clear as springers to arches surfaced during these soil probes both to the north and south of the currently intact bridge.

Abila (Qwayliba)

Project Name: Abila of the Decapolis Archaeological Project
Duration: 17 June - 5 August 2006
Number of Workmen: 50 local workers
Cost of Project: $24,800
Sponsor:W. Harold Mare Archaeological Institute at Covenant Theological Seminary
Directors: Dr. David W. Chapman, Director; Dr. Robert Wayne Smith, Field Director; and Dr. David Vila, Assistant Director
Representative: Taha Batayneh,

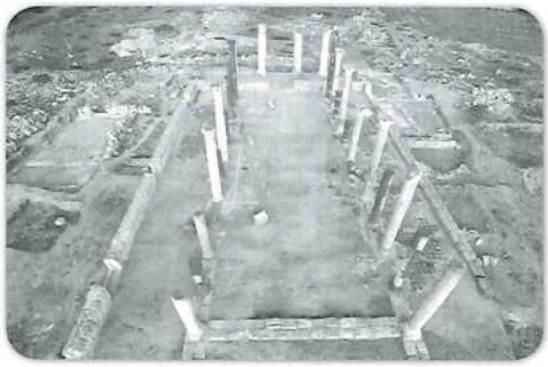
The central goals for the 2006 season of the Abila Archaeological Project were to prepare five Byzantine churches for publication, to secure elevation and GPS data points throughout the site, and to continue excavation into the Iron and Bronze Age remains atop Tell Abil. These goals were largely accomplished, although the complexity of attached structures to some of the churches proved challenging.

Tawfiq El hunaiti from the Department of Antiquities, alongside our architect Chelius Carter, executed a careful reshooting of elevations and a taking of GPS data points throughout the complex two-tell site of Abila. GPS readings were also taken on some of the famous tombs of Hellenistic, Roman and Byzantine Abila. Together these men worked on the beginnings of a computer model of the entire site.

In Area AA below, and to the east of, the summit of Ta11 Abil we conducted a limited expansion of a partially paved area revealed in trench probes from 2004. These five shallow squares, along with their fairly predictable stratigraphy, provided for excellent field training for our younger personnel at the beginning of the season. In the deep squares at the north end of Area AA, greater horizontal exposure of the Iron and Bronze Age strata was further pursued. An Iron Age wall two-courses thick was discovered in two squares. Beneath this wall was a shallow layer of soil followed by another wall with adjacent Iron I and Middle Bronze pottery. While conducting removal of a nearby Hellenistic/Roman wall, a platform with three steps was discovered beneath. Near the southwest side below this platform was discovered a taboo with a nearby small limestone carving, likely of a woman (see photograph).

The Area D church atop Umm al-`Amad was targeted for completion this season. Exterior structures were further defined. Especially remarkable was the mosaic flooring of a room attached to the northwest comer of the church. The materials from the narthex of the church were excavated, as were squares indicating a tesserated plaza to the west of the narthex. The entire church, the

Limestone carving, likely of a woman, from Area AA / Area D church



The nave and side aisles Area D (Umm al-ʿAmad) church

Entrance to cistern in the plaza area, Note the surrounding mosaic and look for the rope marks within the opening

were drawn at a scale of 1:50. Surface artefacts were collected in a 5 m radius around each tomb, and five small test-pits were opened to recover artefacts that could be used to date each tomb type. These test-trenches were back-filled after recording, and in several cases original wall-lines were re-constructed to stabilise any degrading structural remains.

This field-work confirmed the three broad tomb-types identified by the PHS, and established a number of sub-types within each category. The most impressive type is the large multi-chambered rubble tombs. Six examples were recorded in a line running down the slope of Jabal Sartaba, and standing up to 7 m in height. Other types include kerbed tumuli with upright slabs forming an internal rectangular cist (Figure 2), and circular tombs defined by a ring of corbelled boulders around an interior rubble chamber. One example of this type contained an entrance-way with a lintel stone (Figure 3). Five small test-pits were opened, although no in-situ finds were recorded. However, architectural parallels with other excavated kerbed tumuli suggest that this type dates to the EBI-IV, and some sherds from a single vessel excavated in a kerbed cairn in Sirat Zayd suggest that this type may date to the Middle Bronze Age. A second survey season is planned to record additional tomb types around Pella in 2007.

Fig .3: A circular megalithic corbelled tomb in sirat zayid

Pella/ Jabal Sartaba

Project Name: North Jordan Tomb Project
Duration: 18th November-14th December 2006
Number of workmen: 2
Cost of Project: 950 JD
Sponsor: University of Sydney
Director: James Fraser
Representative: Dr Ismaeel Melhim

The first survey season of the North Jordan Tomb Project (NJTP) was successfully conducted. This project investigates stone-built megalithic rijm tombs in the eastern escarpment of the north Jordan Valley, thought to be monuments constructed by late prehistoric nomads. The team included, Director of the Tabaqat Fahl office of the Department of Antiquities, and Benjamin Anderson and Anne-Marie Beavis, two contract archaeologists from Sydney.

The aim of the NJTP is to record a typology of rijm tomb types found in the area, and to identify what geographic and archaeological factors underlie the spatial distribution of each type. It is hoped that this study will help determine whether the people buried inside the tombs were sedentary, nomadic or both, and thus use the tombs as a rare window into further understanding the elusive nature of prehistoric nomadism.

The 2006 season surveyed 53 tombs in two tomb-fields, the first on the southwest spur of Jabal Sartaba, and the second on the ridge of Sirat Zayd near the village of Kufr Abil (Figure 1). These tomb-fields are part of a general spread of over 600 tomb tumuli first identified in a 36 sq. km. area around the multi-period tell site of Pella by the Pella Hinterland Survey (PHS) in 1994-1996. Director Dr Pamela Watson noted three basic tomb types that cluster in discrete groups. The NJTP returned to the Jabal Sartaba and Sirat Zayd tomb-fields to record the tombs in greater detail than the preliminary recording completed by the much broader PHS. The architectural variability of the tombs was documented on a comprehensive feature sheet, with fields for the size, shape and building materials of each monument, as well as for structural features such as platforms, cells, chambers, tiers, kerbing and distinctive stones. Topographic characteristics were also noted, including each tomb's geographic, geo-morphological and ecological siting; its proximity to resources such as water and tracts of land; and its visible relationship to other tombs, archaeological features and topographic landmarks. All tombs were photographed, mapped using a differential GPS system, and select tombs of each type

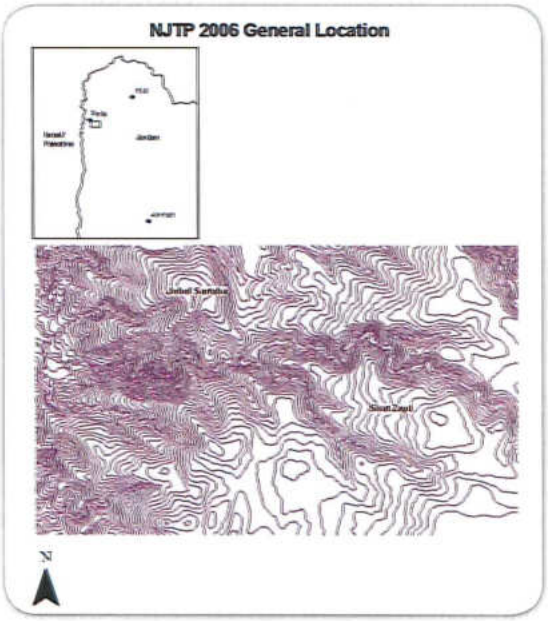


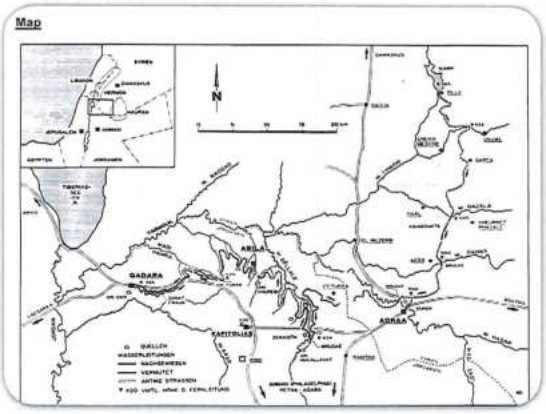
Fig .1

Fig .2 : A kerbed tumulus tomb on Jabal Sartaba with rectangular slab - lined cist

Wadi ash- Shallala, Abila, Gadara

Project Name: Water Systems in Northern Jordan Roman long-distance water pipe in Jordan
Duration :26 / 2 - 13 / 3 / 2006
Number of Workmen :5-8
Cost of Project: 10,000 JD
Sponsor: University of Applied Science Darmstadt, Germany
Director :Prof. Dr. Mathias Doring
Representative: Salameh fayyad

Research in the area of Wadi ash- Shallala started in 2004. Several previously unnoticed ancient parts of a gallery system have been found. The exploration, which continued in 2005, was initially restricted to the area of Wadi ash-Shallala.



Because of the position and height of the identified tunnel parts it appears that there were two parts of the tunnel, connected by a bridge. The almost identical structure of the tunnel parts with a height of 2.60 meters and a wide of 1.60 meters point to a Roman long- distance water pipe. In all probability this water pipe can be assign to the time of the Decapolis towns in about the 2nd century A.D.

In 2006 the exploration has been extend over the whole area, with a range of 40 x 10 kilometers between Wadi ash- Shallala and Gadara. Parts of the gallery system have been found at the following places:

At the east part of Wadi ash- Shallala: at 20 to 100 m above the valley ground
Khirbat az- Zayraqun: two tunnel parts with building shafts with a depth up to 70 meters Al- Mughayyar: at a height of 100 meters above the Wadi ash-Shallala
`Ayn Um Furun: several building shafts and parts of the tunnel
`Ayn as- Sukkar: a building shaft with a depth of 40 meters
`Ayn Khurayba: part of the gallery system with a length of 600 meters
Abila: between Ayn Quwayliba and the city
At the west side of Abila: a building shaft with a depth of 40 meters
Hubras: part of the gallery system with a length of 2 km
Kufr Sum: part of the gallery system with a length of 1 km
`Ayn Turab to Gadara: a tunnel runs parallel to the Hellenistic/ early Roman gallery system
Ibdar: unfinished tunnel with construction errors
Wadi al Hamra: connection to Wadi al-Arab
Gadara: connection the upper tunnel under the acropolis
These findingssuggest that this must have been one of the most

Stairs of a building shaft at the area of wadi ash-shallala

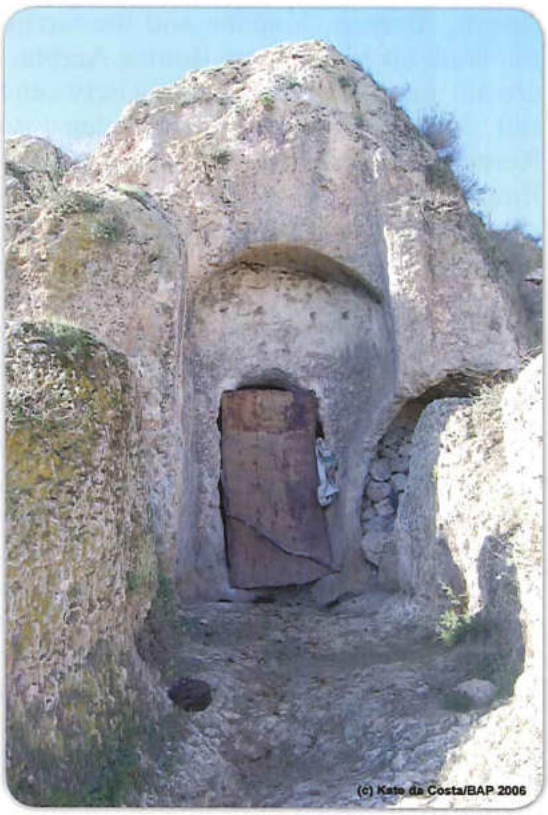
analysed over the next year to see if it was made in Roman Palaestina or Roman Arabia. The provincial border line should run between the Palaestinian and Arabian sites.

In addition, the project has made preliminary plans of several important sites, which will add to the database of information held by the Department of Antiquities. This will assist with the management of those sites which are part of the rich heritage of Jordan, in some cases with occupation from the Chalcolithic to the Mamluk period.

Kh. Qabla underground factory

Funding: Australian Research Council, University of Sydney
kate.da.costa@arts.usyd.edu.au

BAP team breakfast at Ba'un



Kh. Samta enterance to underground house

Wadi ar-Rayyan/Wadi Ziglab/ Sakhra

Project name: Borders of Arabia and Palaestina 2006 season
Duration: 4/11-14/12/2006
Sponsor: John Ralph Camera House, Erina, Australia
Director: Dr. Kate da Costa, Department of Archaeology, University of Sydney, Australia
Representative: Khalid Junaideh

A nine member team from the University of Sydney, Australia, has undertaken a six-week field season in the Wadi ar- Rayyan/Wadi Ziqlab/Sakhra area to make an archaeological investigation of an ancient Roman provincial border. Our representative from the Department of Antiquities was Khalid Junaideh (Department of Antiquities permit 2006/81).

After 400 AD, the north west of Jordan formed part of the Roman province of Palaestina (later Palaestina Secunda) while the area from Dera'a in the north, Jarash, Amman, Madaba and the territories south to the Wadi al- Mujib were Roman Arabia. However, we are not sure where the division between the provinces fell. In fact, no provincial border anywhere in the Roman Empire has been securely traced. The Roman Empire lasted for over 700 years, and a major part of its administration were the provinces, equivalent to the governates in modern Jordan. As part of a study into the history of this administration, we need to know where the edges of the provinces lay – the borders, in fact – to better understand how the Empire operated.

Kh. 'Asif 5m square

The Borders of Arabia and Palaestina project has been funded by the Australian Research Council because it is a significant and innovative project to use archaeology to solve the problem of how to trace the borders when no documents or border stones have survived. The results from this project will be usable anywhere in the Roman Empire, providing another example of the archaeology of Jordan being of international importance.

Kh. Fara square and sounding layout

The team has sampled ceramics from eleven sites which are located either side of the currently assumed border – the Wadi ar- Rayyan. However, it is by no means certain that the Wadi was the border, nor is it clear where the border runs east of the modern Ajlun/ Irbid highway. Work took place at Kufr Abil (Kh. Duweir & Kh. Nasar), Ba`un, Kh. el-'Asif, Kh. Qabla, Rasun, Kh. Mahrama, Kh. Hashemiya (former Fara), Kh. Sittat, Kh. Samta and Kh. Kufraya. Ancient Roman and Byzantine pottery collected from each site will be

of the eastern city entrance.
In 2006 we could clarify the access system and road network outside of the cavea, between North Theatre and City Wall including a direct entrance from the settlement on the hilltop to the Cavea.
Work in the trenches of the orchestra confirmed the theory, that the North Theatre was altered to an amphitheatre in Late Roman time (Fig. 3). In this context the scaenae frons was completely dismantled.

The Cisterns

Furthermore a survey with a special focus on the system of water support and drainage in the Hellenistic-Roman city was conducted. 76 cisterns were found on the settlement on the hilltop. These were all documented on the topographical map of the site. Of theses 44 cisterns were found to be dry, so it was possible to take measurements (Fig. 4). The volume from the cisterns fluctuates from around 20 m^3 to 500 m^3. Their constructions differ; the smaller cisterns were built in sections in the shape of a bottle or a pear and the larger ones have mostly a quadratic floor space. Further in the urban area, in particular in the western city expansion, there were found to be 36 cisterns; these were documented for comparison only.

Comment on the „Rehabilitation and Re-use of Umm Qays Village.

During the visit of H.E. Muniry Nasser, Minister of Tourism and Antiquities of the Hashemite Kingdom of Jordan, in Umm Qays on May 1st, 2006. Claudia Bührig (DAI Berlin) and Günther Schauerte (SMPK Berlin) were asked to write a commentary on the rehabilitation study for Umm Qays and to give suggestions for changes or for supplementations. More informations have been communicated during two discussions the first with MoTA under the direction of Marah Jamal al-Khayyat on the May 4, 2006.
The commentaries of the German experts are based primarily to the archaeological and other aspects which depend directly or indirectly on them; they were send to Mrs. Marah Jamal al-Khayyat (MoTA).

Workshop "Archaeological Research and Tourism in Gadara/Umm Qays" organized by the DoA Amman, in Umm Qeis (Jordanien) 20th September 2006.
Note. Presentation of the German research project in Gadara/Umm Qays: by Claudia Bührig and Bernd Liesen (German Institute of Archaeology. Orient Department, DAI). Further participants: Fawwaz Al-Khraysheh, Muhammed Najjar, Eimad Obeidad, Abu Harun, May Shaer (DoA), Rami Daher and Alison McQuitty (TURATH), Yumiko Yoshioka, Ken Mastumoto, Jutta Häser (GPIA), Marah Jamal Al-Kayyat (MoTA).

"Eastern city area" with the North theatre district

Now and for the coming years - we will concentrate our research on the settlement hilltop including the Hellenistic city wall and opposite, the area of the eastern city entrance on the so called northeast terrace and as well on the system of water supply in ancient Gadara.

The eastern city area covers the so-called North Theatre in the south with the projecting Roman podium temple II, the temple area with a Late Hellenistic podium temple I in the north, as well as the east gateway, as yet unexcavated, in the city fortifications in the east (Fig. 2).

At this side the north theatre huddles against the slope of the settlement hill. The North Theatre, which can be dated, because of the first analysis of the archaeological findings in the Early Imperial Period, is orientated to the northeast preliminary terrain terrace with the ancient Hellenistic main sanctuary I. The Doric podium temple I was probably dedicated to Zeus Nikephoros.

The large open space between the North Theatre and the temple area is transacted from the east-west axis and borders the Abila-Gate in the east. The exact course of the main street and how these areas were designed in detail in the beginning of the first century A.D. is still obscure.

The urban situation on the eastern city entrance changes after the destruction of the Late Hellenistic podium temple I in the First Jewish Rebellion.

In the Early Imperial time a second podium temple II was erected in front of the

North facade of the stage building, precisely in central axis with the North Theatre (Fig. 2). Furthermore the open space in front of the theatre was given an architectural framing: Along the main east-west axis a tabernae-structure with a passageway was established, confining space in the north and providing an orientation in the same axis for the whole ensemble.

It is remarkable that this second extension during the second half of the first century A.D. correlates with further building work in the city area of Gadara, among others: The building of the Tiberias Gate and the representative finishing of the colonnaded street, both situated in the west of the city.

The first four campaigns have developed a picture of the chronological order of functional and structural changes

Fig3 : Arena from the Byzantine period. View from the west (© DAI. Orient-Department, C. Bührig)

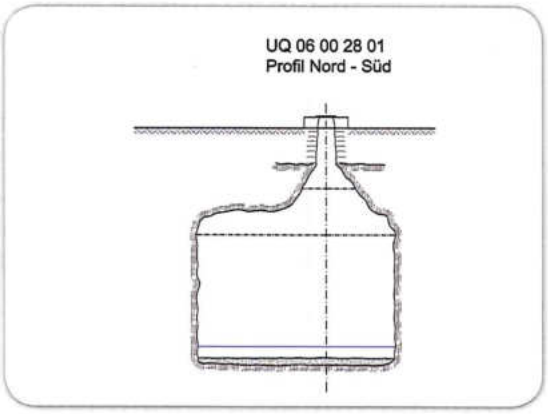


Fig4 : Profil of the Cistern 28-01 in Beit Melkawi (© DAI. Orient-Department, P. Keilholz)

Gadara/Umm Qays
Project Name: Archaeological and Architectural Studies on the History of Gadara "Urban development and cultural history of the ancient city" (nineteenth season).
Duration: August 29, 2006 to September 28, 2006
Number of Workmen: 12 local workers from Umm Qays
Cost of Project:
Sponsors:The German Gadara Project 2006 is a joint research project of the German Institute of Archaeology, Orient Department (DAI) Claudia Bührig and the State Museums in Berlin (SMPK) Günther Schauerte, supported by the German Research Foundation Bonn' and the Deutsche Wasserhistorische Gesellschaft'.
Directors: Claudia Bührig (Orient Department of the German Archaeological Institute Berlin) and Günther Schauerte (State Museums Berlin)
Representative: Muhammed Abu Harun

Gadara/Umm Qays1

The Hellenistic-Roman city of Gadara is situated along the modern town of Umm Qays in the northwest Jordan. Gadara is situated in a unique topographical position (Fig. 1). Key focus of the research project is the analysis of the urban development and cultural history of the city of Gadara from the Hellenistic to the Byzantine era: And on other questions its relation to the hinterland. Gadara was a choice settlement location, because of the excellent environmental conditions, the strategically favourable situation and the supra-regional communication and traffic connections.

Fig1: View along the East-West-Axis to the west to the Ar al-Al (© DAI. Orient-Department, C. Bührig)

In 2006 the Orient Department of the German Archaeological Institute carried out a rewarding season of excavation and research on the "eastern city area" including the North Theatre, Temple I and Temple II, together with the settlement hilltop in Gadara/Umm Qays (Fig. 2). The North Theatre itself still poses questions concerning the water supply and its connection to the tunnel/channel system under the settlement on the hilltop of Gadara. The aim of the present research is to describe the history of ancient Gadara and the continuous changing process, beginning with the Hellenistic undulating settlement on the hilltop, leading towards the Roman street along the East-West-Axis (Fig. 1).
The German recent research project clarified the inner city architecture, its development and the significance for the municipal settlement of Gadara. This requires the precise knowledge of the ancient city and regional maps, public buildings with religious and profane uses and infrastructural installations including the residential areas. Therefore the topographical map is continuously up-dated with all the results of archaeological research in ancient Gadara/Umm Qays.

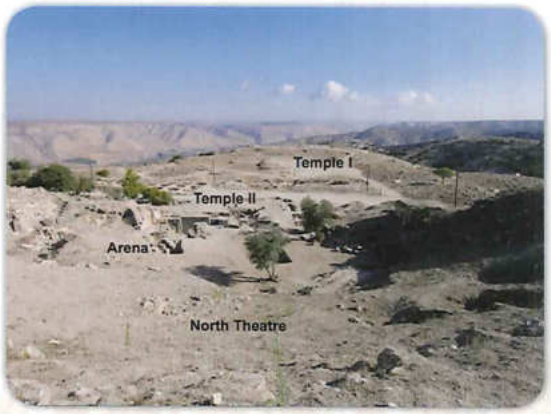


Fig2 : View from the south to the "eastern city area" with the North Theatre, the arena and the temple area (© DAI. Orient-Department, C. Bührig)

1 We would like to thank cordially Director General his Excellency Dr. Fawwaz al-Khraysheh, the Inspector at Umm Qays Mr. Eimad Obeidad, the engineer Ali Aysi and the local representative Muhammed Abu Harun of the Jordanian Department of Antiquities for their support.

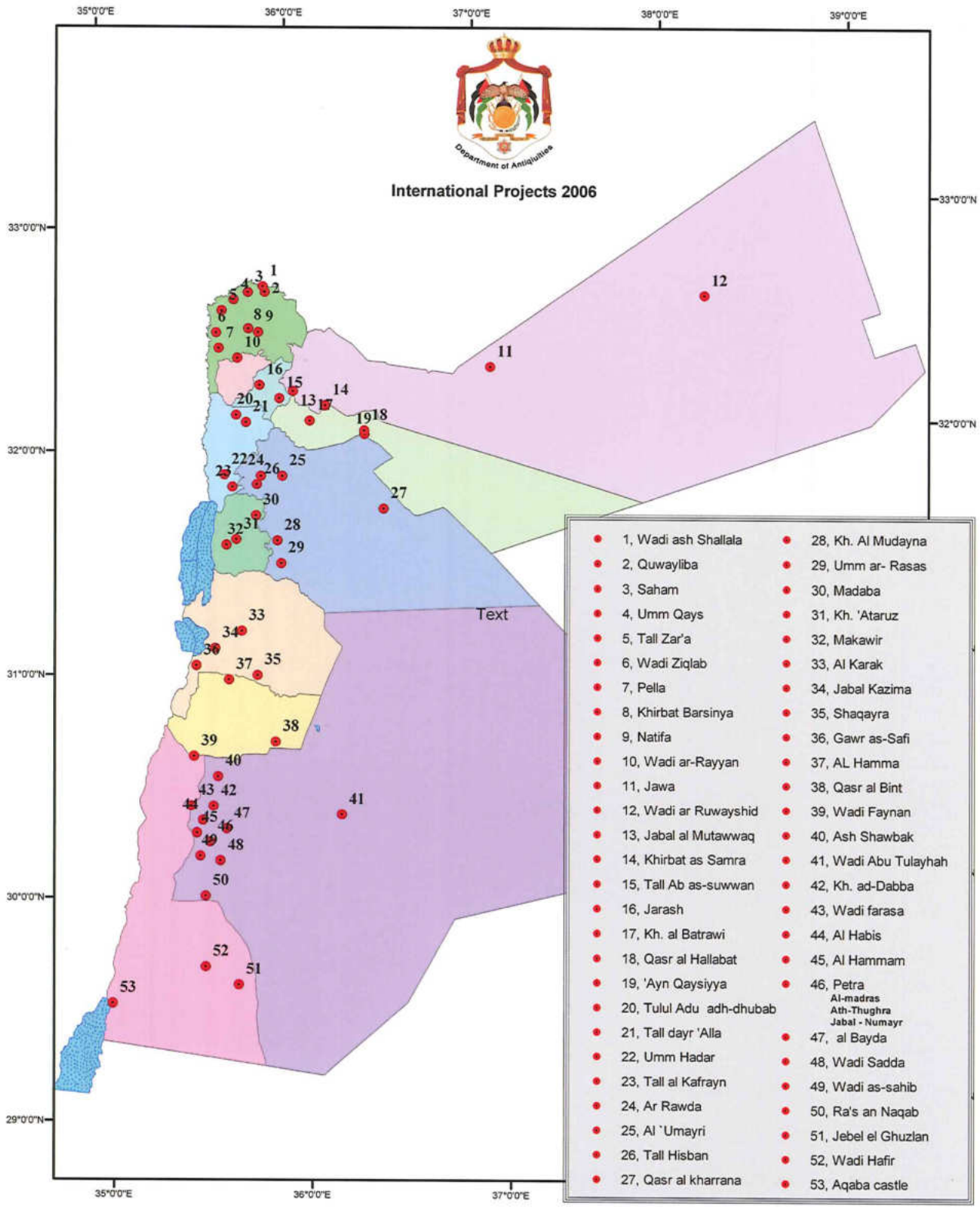
The DoA is proud to support the pilot projects covered in this magazine, and regrets not covering the below projects which it also heartily supports-due to the absence of their related press releases.

Our warmest thanks go to all the dedicated project directors who provided us with their press releases which ,in turn, mad this publication possible.

Great Arab Revolt
Jarash Cathedral
Ar Rubba
Al Humayma

Tabel of Contents

International Projects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Text
1, Wadi ash Shallala
2, Quwayliba
3, Saham
4, Umm Qays
5, Tall Zar'a
6, Wadi Ziqlab
7, Pella
8, Khirbat Barsinya
9, Natifa
10, Wadi ar-Rayyan
11, Jawa
12, Wadi ar Ruwayshid
13, Jabal al Mutawwaq
14, Khirbat as Samra
15, Tall Ab as-suwwan
16, Jarash
17, Kh. al Batrawi
18, Qasr al Hallabat
19, 'Ayn Qaysiyya
20, Tulul Adu adh-dhubab
21, Tall dayr 'Alla
22, Umm Hadar
23, Tall al Kafrayn
24, Ar Rawda
25, Al `Umayri
26, Tall Hisban
27, Qasr al kharrana
28, Kh. Al Mudayna
29, Umm ar- Rasas
30, Madaba
31, Kh. 'Ataruz
32, Makawir
33, Al Karak
34, Jabal Kazima
35, Shaqayra
36, Gawr as-Safi
37, AL Hamma
38, Qasr al Bint
39, Wadi Faynan
40, Ash Shawbak
41, Wadi Abu Tulayhah
42, Kh. ad-Dabba
43, Wadi farasa
44, Al Habis
45, Al Hammam
46, Petra
Al-madras
Ath-Thughra
Jabal - Numayr
47, al Bayda
48, Wadi Sadda
49, Wadi as-sahib
50, Ra's an Naqab
51, Jebel el Ghuzlan
52, Wadi Hafir
53, Aqaba castle

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A.C.P
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