حضرة صاحب الجلالة الملك عبدالله الثاني ابن الحسين المعظم

كلمة العدد

إنطلاقا من رؤية دائرة الآثار العامة في الحفاظ على المواقع الأثرية وتقييمها بشكل ينسجم مع أفضل المعايير والممارسات الدولية، وتقديمها بطريقة مستدامة لتحقيق أهداف السياحة الوطنية، فقد أولت الدائرة اهتماما في مجال الكشف عن الآثار وتنظيم أعمال التنقيب والصيانة والترميم بما يعزز هذه الرؤية .

توزعت المشاريع على مختلف مناطق المملكة، وبلغت ثلاثين مشروعا نفذتها كوادر الدائرة مابين تنقيب أو صيانة وترميم، وواحدا وستين مشروعا دوليا تمت من قبل بعثات أثرية أوفدتها مؤسسات دولية ضمن إتفاقيات تعاون أبرمت مع دائرة الآثار .

وسوف تجد عزيزي القارئ في هذا العدد كما في الأعداد السابقة من مجلة منجزات، ملخصا للمشاريع التي نفذت في العام ٢٠٠٧ سواء المشاريع التي نفذتها دائرة الآثار العامة أو المشاريع التي نفذتها البعثات المحلية والدولية.

ومع إدراكنا أن الملخصات هذه لا تغني عن الإطلاع بشكل أوسع على التقارير الموجود في قسم التوثيق أو مانشر في المجلات والدوريات المتخصصة، إلا أنها تشكل مدخلا للقارئ العادي وللباحث على السواء للاطلاع على ما استجد من أعمال تنقيب وترميم للمواقع الأثرية .

الشكر لجميع الزملاء والزميلات في دائرة الآثار العامة على جهودهم المخلصة للإسهام في بناء وطننا العزيز .

والله من وراء القصد

رئيس التحرير

د٠ فواز الخريشة

مجلة منجزات

تصدر عن دائرة الآثار العامة

صندوق بريد ٨٨

عمان ١١١١٨-الأردن

البريد الإلكتروني

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رقم الإيداع لدى المكتبة الوطنية

١٧١٥/ ٢٠٠٤ / د

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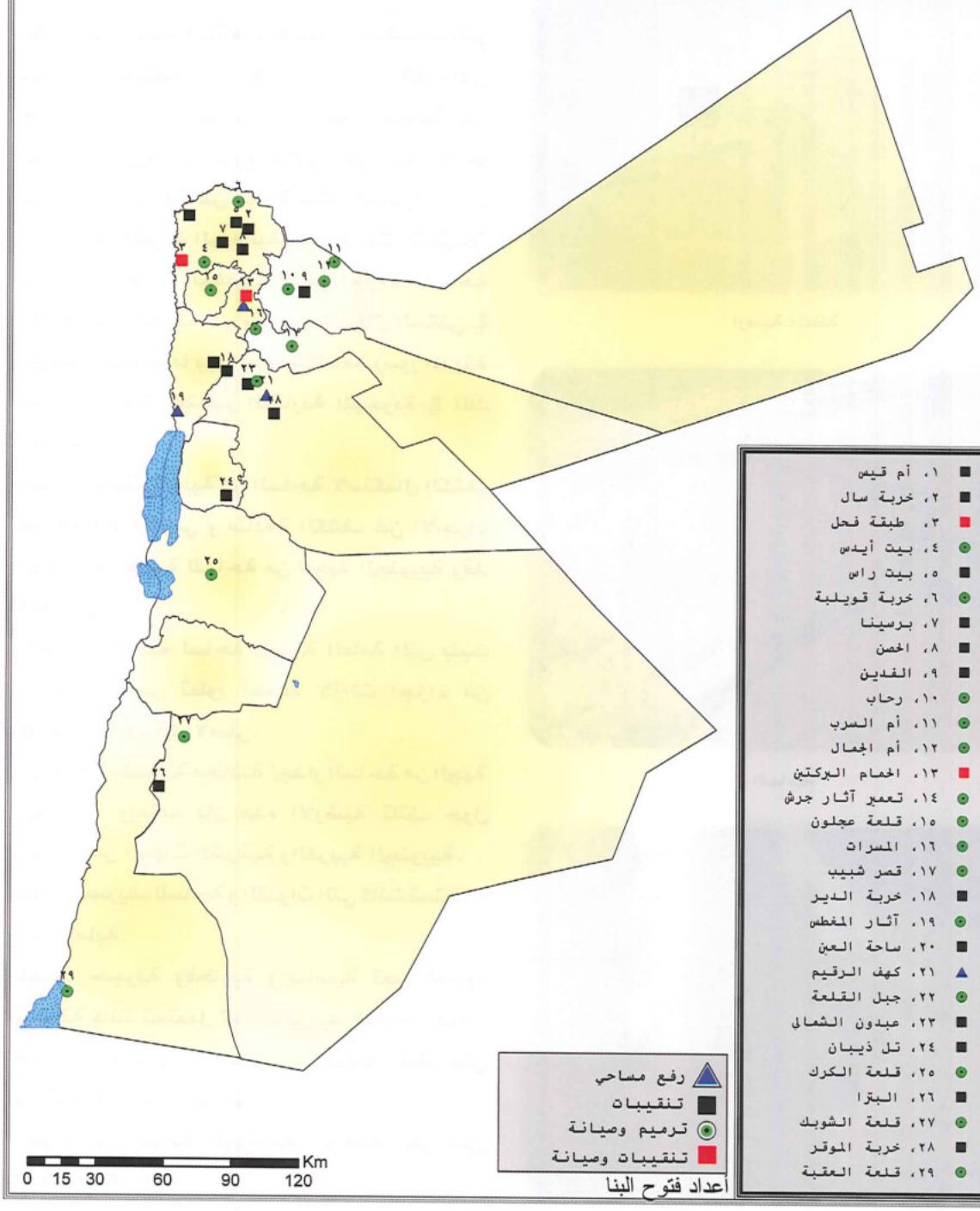


اعداد فتوح البنا

اسم المشروع: التنقيبات في أم قيس

مشرفا المشروع: عماد عبيدات، سلامة فياض

يعتبر هذا الموسم استكمالاً لأعمال التنقيبات التي نفذت في المنطقة (X) في المواسم السابقة والتي جاءت في الأصل لدراسة المنطقة الفاصلة بين الحمامات الرومانية وشارع الدكيومانوس، حيث كشف في المواسم السابقة عن ساحة تعتبر عنصراً رئيسياً في تخطيط المدينة الرومانية، وقد هدفت التنقيبات في هذا الموسم إلى الكشف عن باقي أجزاء الساحة مع محاولة التعرف على مراحل الإشغال السكني في المنطقة الفاصلة ما بين الساحة العامة وسور المدينة المبكر و دراسة العناصر المعمارية الموجودة في تلك المنطقة.

نقب في الجهة الغربية من الساحة لاستكمال الكشف عن جدارها الغربي و متابعة الكشف عن الأجزاء الخارجية التابعة للساحة من الجهة الجنوبية وقد كشف عن:-

١. الأجزاء الغربية لساحة المدينة العامة التى بنيت بالحجر الكلسي تعلوه أعمدة لازالت أجزاء من قواعدها في مكانها الأصلي.
٢. أرضية فسيفسائية محاذية لجدار الساحة من الجهة الخارجية ويعتقد بان هذه الأرضية تلتف حول الساحة من الجهات الشرقية والغربية الجنوبية.
٣. نظام التصريف للساحة و القنوات التي كانت تستخدم لتلك الغاية.
٤. قنوات حجرية وفخارية ورصاصية تعود لعصور مختلفة كانت تستعمل لغايات تزويد المدينة بالمياه.
٥. مبنى يربط بين الساحة وسور المدينة المبكر بني باستخدام الحجر البازلتي.
٦. أجزاء من البوابة الرومانية الواقعة على سور المدينة المبكر.

أرضية مبلطة

الساحة

قناة مياه

اسم المشروع: تنقيبات بيت راس
مشرفو المشروع: وجيه كراسنة، سلامه فياض،
عبد الرؤوف طبيشات

العمل والنتائج:

-استمرت أعمال التنقيبات في منطقة المدرج والمنصة للكشف عن باقي أجزاء المرافق المعمارية حيث كشفت التنقيبات عن:

- باقى أجزاء خلفية منصة المسرح من الجهة الغربية.
- قاعدة الأعمدة التي تزين خلفية المنصة من الجهة الغربية
- أرضية الأوركسترا و قناة منحوتة بالصخر

المسرح

خلفية منصة المسرح

أسم المشروع: صيانة وترميم كنيسة بيت إيدس
مشرف المشروع: م. أمجد البطاينة

العمل والنتائج:

جاء العمل في عام ٢٠٠٧م استكمالاً لأعمال المواسم السابقة وتركز في هذا الموسم على:

١. إزالة كافة طبقات الأتربة التي كانت تغطي الأرضيات الفسيفسائية

٢-ترميم وتثبيث حواف الأرضيات الفسيفسائية واستبدال الحواف القديمة منها والمتشققة باخرى جديدة.

٣-استكمال التنقيبات في الغرفة الجنوبية الغربية من المجمع الكنسي والكشف عن كامل أرضية الفسيفساء.

٤-بناء جدار استنادي بطول ٢٥م في الجهة الشرقية وعلى مدخل الموقع وسلاسل حجرية بطول ٥٠م.

المجمع الكنيسي

الأوضية الفسيفسائية

اسم المشروع: تنقيبات برسينا

مشرف المشروع: د. محمد حتاملة / جامعة اليرموك

العمل والنتائج:

تركز العمل في هذا الموسم في المنطقة (A) حيث تم فتح ١٠ مربعات وهي امتداد للمربعات التي فتحت في الموسم الماضي ٢٠٠٦م، حيث كشف عن غرف مبلطة بالحجارة استخدمت في الفترة الهلنستية حتى الأموية وعدد من الجدران بنيت أغلبها من حجارة متوسطة وكبيرة مشذبة وغير مشذبة حيث تم إعادة بناءها خلال مراحل مختلفة بدليل إغلاق بعض المداخل، ومن المميزات المهمة الأرضيات المبلطة التي استخدمت خلال الفترة البيزنطية والأموية بعضها دمر وبعضها الآخر غير مدمر وقد عولجت باستخدام الملاط الكلسي وعثر أيضاً على مجموعة من أفران الطابون.

وكسر فخارية تعود إلى الفترات البيزنطية والأموية وسراجين يعودان للقرن السادس الميلادي.

غرفة مبلطلة

بعض الجدران

إسم المشروع: مدافن من العصرين البرونزي والحديدي / الحصن

مشرفا المشروع: وجيه كراسنة، عدنان النقرش

العمل والنتائج:

كشفت حفريات الصرف الصحي في الجزء الشرقي من تل الحصن عن مدافن تعود للعصرين البرونزي والحديدي وتتألف من ثلاث غرف دفن منحوتة بالصخر الجيري تتفاوت في مساحتها وأحجامها وتخطيطها وتلتقي جميعاً على محور واحد مقطوع بالصخر بشكل عمودي وهو المدخل الوحيد لهذه الغرف وقد عثر بداخلها:

- ٥٠ صحنا فخاريا مختلفة الاشكال والاحجام
- ١٥٠ مكيالاً فخاريا مختلفة الأحجام
- ٧٥ جرة فخارية مختلفة الاحجام
- ٧٠ زبدية فخارية وخمسة أسرجه فخارية وثلاثة أواني بازلتية

جرار فخارية في الموقع

جرار فخارية في احدى الغرف

اسم المشروع: تنقيبات إنقاذية / سال
مشرف المشروع: وجيه كراسنة

العمل والنتائج:

يعود الإستقرار في موقع سال إلى عصور ما قبل التاريخ كموقع البياض الشرقي إلى الجنوب من منطقة سال الذي يعود للعصر الحجري الحديث الفخاري، وموقع البياض الغربي الذي يعود للعصر الحجري النحاسي، وأثناء الحفريات الإنقاذية التي جرت في منطقة سال عثر على مقبرة محفورة بالصخر تضم حجرة واحدة تعود للعصرين البرونزي المتأخر و الحديدي، عثر فيها على زبادٍ وجرار فخارية بعضها مكسور، و٣٩ جرة فخارية بثلاثة أرجل، ومخرز برونزي ورأس حربة حديدية ومكيال فخاري.

لقى أثرية (موقع سال)

اسم المشروع: صيانة موقع قويلبه
مشرفا المشروع: عماد عبيدات، علي العويصي

العمل والنتائج:

- استبدال السياج القديم بطول ٤٥٠م وتركيب بوابة حديدية لكنيسة أم العمد.
- وضع لوحة إيضاحية في الكنيسة المصلبة، وسياج بطول ١٩٣م وبوابة حديدية بطول ٤م.
- نقب في موقع الجسر الروماني وتبين وجود مرحلة استقرار لاحقة للفترة الرومانية تعود للفترات الإسلامية.

منظر عام لموقع قويلبة

الكنيسة المصلبة

اسم المشروع: اعادة تعمير جرش
مشرف مشروع: عبد المجيد مجلي

العمل والنتائج:

أولاً :- البوابة الشمالية

الواجهة الجنوبية :-

١- بناء النيش الشرقي والذي يبلغ قطره٧١، ١م وارتفاع ١٠، ٣م ، والنيش الغربي الذي يبلغ قطره ٨٠، ١م وارتفاع ٠٥، ٣م ٠

٢- بناء الشبابيك العلوية في الواجهة الجنوبية والبالغ عرض كل منهما ٣٠ ،١م وارتفاع كل منهما ٣٠، ٢م ٠

٣- ترميم وصيانة الجانب الأيمن والجانب الأيسر للعقد الأوسط بارتفاع ٤٠، ٦م ٠

٤- ترميم وصيانة أنصاف الأعمدة الموجودة على جانبي الحنيات والشبابيك بارتفاع ١٥، ٦م ٠

٥- دق ونحت التاجيتين الناقصتين .

٦- نحت الحجارة الناقصة بالعقد الأوسط .

الواجهة الجنوبية للبوابة الشمالة قبل العمل

... اثناء العمل

ثانياً :صيانة وترميم الكنائس

مشرفا المشروع: عبد المجيد مجلي ، كاترينا حمارنة

نفذت اعمال صيانة وترميم لعدد من الكنائس في مدينة جرش حيث أزيلت الأتربة و الأعشاب من الجدران، كما كشف عن الأرضيات الفسيفسائية واجريت صيانة وتدعيم للتالف منها. من هذه الكنائس: كنيسة الأسقف أشعيا، كوزموس ودميانوس، كنيسة الدفن، جينيسيوس

كنيسة اشعيا

اسم المشروع : تنقيبات وترميم الحمام في البركتين
مشرفا المشروع : محمد البلاونة، موسى ملكاوي

العمل والنتائج:

استمراراً للتنقيبات السابقة والتي كشفت عن وجود حمام روماني بجانب البركتين فقد هدف العمل في موسم ٢٠٠٧ م إلى كشف المزيد من مرافق الحمام وخاصة في الزاوية الشمالية الغربية حيث كشف عن أرضية الغرفه الساخنه مبلطة بالقرميد وبجانبها قناة مبلطه بالقرميد لنقل وتصريف المياه، كما كشف عن غرفة مستطلية ذات بلاط قرميدي وفيها قنوات لنقل المياه و قد كُشف سابقاً عن بعض اجزاء الحمام مثل الغرفة الباردة وغرفة تغيير الملابس وغرفة تسخين المياه وبعض قنوات نقل وتصريف المياه وأجزاء من الغرفة الساخنه وقد رمم بشكل مبدئي بعض الجدران والأرضيات وحفظ البلاط الحراري لحمايته من مياه الأمطار لحين وضع حماية كامله على الموقع بعد الإنتهاء من التنقيب

في موقع البركتين المجاور للحمامات المكتشفة نقب هذا العام ايضاً في المسرح لكشف باقي العناصر المعمارية فيه وإعادة ترميمه ، وتشير الدراسات أن تاريخ المسرح يعود إلى نهاية القرن الثاني وبداية القرن الثالث الميلادي وفي الفترة البيزنطية استعمل المسرح لإقامة الإحتفالات بجانب البرك .

الغرفة الساخنة

إحدى غرف الحمام

اسم المشروع: تنقيبات تل (أبو الصوان)

مشرف المشروع: د. ميسون النهار/ الجامعة الأردنية

العمل والنتائج:

يقع تل ابو الصوان على الجانب الشرقي من الطريق السريع بين عمان وجرش قبل الطريق المؤدية الى عجلون، وقد أجريت في الموقع مسوحات أثرية من قبل عدد من الباحثين خلال العقود السابقة، وفي عامي ٢٠٠٥ / ٢٠٠٦ نقب في الموقع من قبل طلبة قسم الآثار في الجامعة بإشراف الدكتورة ميسون النهار، وفي صيف ٢٠٠٧ نفذت قسم الآثار في الجامعة الأردنيّة بالتعاون مع دائرة الآثار تنقيبات في الموقع للموسم الثالث.

كشفت أعمال التنقيب عن قرية زراعية تعود إلى العصر الحجري الحديث ما قبل الفخاري الفترتين « ب، ج » والعصر الحجري الحديث الفخاري (المرحلة اليرموكية). (٧٠٠٠-٥٠٠٠ ق م)، ويتميز الموقع بأنه الوحيد الذي نقب ويعود إلى هذه الفترة في المنطقة الواقعة إلى الشمال من نهر الزرقاء. وتمثل هذه الفترة نشأة القرى الزراعيّة واستقرار الإنسان بشكل كامل وبداية الزراعة والعمارة المنظمة. وتضم القرية الزراعية جدران و أساسات عمارة تمثل البيوت المربعة والمستطيلة.

العمارة التي كشف عنها تختلف عن باقي مواقع العصر الحجري الحديث في الأردن مثل عين غزال وبسطة وغيرها من المواقع. و ذلك من حيث شكل العمارة و سماكة الجدران كما ان الموقع ضم ارضيات من الجص بلون ابيض و أحمر وأخرى بلون اصفر، تمثل كل واحدة من هذه الأرضيات مرحلة من مراحل العصر الحجري الحديث ماقبل الفخاري والعصر الحجري الحديث الفخاري. كما عثر في الموقع على ادوات صوانية مختلفة، ونصال تمثل الطرز المعروفة في تلك الفترة والتي تسمى بنصال أريحا وجبيل والعمق.

اساسات البيوت

الغرف وتظهر فيها الأرضيات المجصصة

اسم المشروع: التنقيبات في السور الشمالي

مشرفا المشروع: محمد البلاونه، ناجح أبو حمدان

العمل والنتائج :

نفذت تنقيبات في الجزء الشمالي من سور مدينة جرش الأثرية وبمحاذاة بوابة السور بهدف إبراز السور على جانبي البوابة، بني السور من الحجر الجيري طبزة مؤطر، يعود للقرن الأول ق.م/ القرن الأول الميلادي، وكشفت أعمال التنقيب عن:

- جزء من السور بطول ٩م وارتفاع ٢-٣م بواقع ٦ مداميك.
- الحجارة الناتجة عن انهيار السور، حيث تم توثيقها تمهيدا لإستخدامها في إعادة ترميم السور لاحقا.

اسم المشروع: تنقيبات عبدون الشمالي

مشرفا المشروع: أديب ابوشميس، ابراهيم الزبن

العمل والنتائج:

بعد الكشف الحسي على هذه الأرض تبين وجود جدار على السطح، وكإجراء احتياطي تقرر القيام بالتنقيب وتوثيق ما يكشف قبل إجراءاية العمال انشائية.

نقب في المربعين A:a1، B:a1 وكشف عن جدار بطول ١٠,٧٧م وعرض ٩٧-١,٢م من حجارة غشيمة مقطوعة تربطها مونة من الطين. ظهر مدخل بعرض ٧٦سم وتشكل من دعامتين من الحجارة المشذبة كاطار للمدخل، كما ظهرت جدران تعامدت مع هذا الجدار مشكلة غرفة مساحتها من الداخل ٦,٢×٣,٩م وقد تراوحت ارتفاعات الجدران عند القاعدة (الاساس) بين ١,٦٧م الى ١,٣م.

تتكون هذه الجدران من صفين من الحجارة بمداميك منتظمة بإرتفاع ٧٠سم، ثم اكمل البناء على هذه الجدران في فترات لاحقة ولذلك لم يستخدم البناء نفس الاسلوب رغم اعادة استخدامه للمواد الأصلية. مونة المداميك الاولى من الكلس المضاف للطين الذي استعمل في مواقع عديدة من العصر الحديدي المتاخر/ الهلنستي.

الدراسة ألأولية للفخار تشير إلى أنه يعود للعصر الحديدي المتأخر/ الفارسي، كما عثر على فخار من العصر الروماني والبيزنطي إلى جانب فخار العصر الإسلامي نتيجة إعادة استخدام المبنى.

هذه البقايا العمائرية التي تم بناؤها من الحجر الغشيم المدعم بالطين والقصارة من الخارج يفسر وجود مركز تخزين للإنتاج الزراعي ودليل ذلك اكتشاف جرة خزين ملقاة في الردم، كما أن النسبة العامة لكسر الفخار تعود لمثل هذه الجرار

إن موقع البناء يمتد أسفل الشارع العام حيث يشرف هذا المكان على مراقبة سهل زراعي يقع في منطقة حوض رأس العين الذي يبعد ١,٧٠٠م تقريبا .

قبل التنقيب

اثناء التنقيب

بعد التنقيب والترميم

اسم المشروع: الرفع المساحي لموقع المقابر الرومانية / منطقة أهل الكهف
مشرف المشروع: أ ديب أبوشميس

العمل والنتائج:

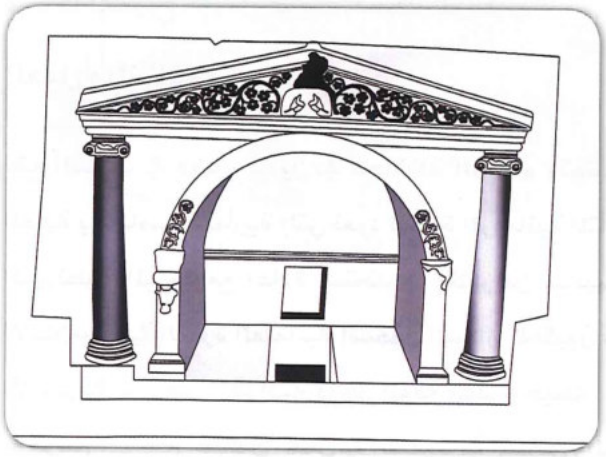
الموقع عبارة عن هضبة متوسطة الإرتفاع تنحدر نحو الجنوب والجنوب الشرقي،هذا الاتجاه ساد في العصر الروماني لاستقبال الشمس لإعتقادهم بتأثيرها الديني. وقد أرخت المدافن إلى العصر الروماني المتأخر(القرن الثالث – الخامس الميلادي). تتشكل المدافن من غرفة أمامية للطقوس الدينية يليها غرفة تحوي أماكن وضع الجثامين نحتت جميعها في الصخر بدقة وبشكل هندسي متكامل.

حدد القانون الروماني الأماكن التي تخصص للمقابر منها بجانب الطرق الرئيسة والطرق الريفية المؤدية إلى المدن لتسهيل الوصول إليها إثناء الزيارات الموسمية (زيارة دينية).

قسم الموقع المخصص للآثار إلى مناطق A،B،C،D، في المنطقةC احد عشر مدفنا ذات أشكال هندسية ومقاسات متباينة، منها مدفن يدخل إليه بدرجات نحو ساحة الدفن وهي غرفة سماوية أبعادها ٧,٢٠ ×٨,٧٠ م نحتت الواجهة الرئيسة على شكل مثلث (Pediment) بارتفاع ٣م وفي نصفه العلوي كوة ذات سقف مقوس تحوي تمثالا نصفيا(مشوه) (ربما يمثل رمز آلهة الموت عند الرومان) على طرفي المثلث عمودان بتيجان آيونية و هذا الشكل يمثل واجهة معبد روماني ذا زخارف نباتية وحيوانية. وبمنتصف الواجهة ومع مستوى أرضية هذه الساحة حفر مدخل حجرة الدفن التي تحوي الجثامين .

لحماية الموقع، وضع سياج بالتعاون مع أمانة عمان الكبرى على طول واجهة المقابر وبقي مسافة ٧٠م.

احد المدافن



مدخل احد المدافن

اسم المشروع: ترميم و صيانة قلعة الكرك
مشرف المشروع: م. نوفل العجارمة

ينفذ المشروع بالتعاون مع سلطة المصادر الطبيعية من خلال خطط سنوية ركزت عام ٢٠٠٧ م على معالجة الإنهيارات الناتجة عن تأثير العوامل الطبيعية كالزلازل و الظروف المناخية.

استكمل تثبيت و ترميم الواجهة الجنوبية للبرج الشمالي الشرقي و الجدران الداخلية RW1 ، و RW2 و الواجهة الداخلية للسور الشمالي و الواجهات الجنوبية و الشرقية للبرج الشمالي الغربي حيث تم إنجاز أعمال الترميم التالية : -

١ - البرج الشمالي الشرقي

- إعادة بناء ما حجمه (٥٤) م٣.
- تلبيس حجر بناء اثري للواجهة من الداخل والخارج بمساحة (٣٠) م٢
- تكحيل حلول حجر البناء التي تم تلبيسها بمساحة (٩٠) م٢.
- صب أرضية البرج بحجم (٢٠) م٣ لمنع تسرب مياة الأمطار لأساسات البرج.
- تبليط و تكحيل أرضية البرج بمسا حة (٧٠) م٢

الجدار اثناء الترميم

٢ - البرج الشمالي الغربي

- إعادة بناء الإنهيار داخل الواجهة بحجم (٢٨) م٣.
- تلبيس حجر بناء أثري للواجهة من الداخل بمساحة (٥٦) م٢.
- تكحيل حلول حجر البناء التي تم تلبيسها بمساحة (١٥٦) م٢.
- تكحيل حلول حجر البناء القائم بمساحة (١١٥) م٢.

بعد الترميم

٣ - الجدران الداخلية

- إعادة بناء الإنهيار داخل الجدار RW1 بحجم (٩) م٣.
- تلبيس حجر بناء أثري لواجهة الجدار بمساحة (٢٥) م٢.
- تكحيل حلول حجر البناء التي تم تلبيسها بمساحة (٩٠) م٢.
- تلبيس حجر بناء أثري لواجهة الجدار RW2 بمساحة (٩) م٢
- تكحيل حلول حجر البناء التي تم تلبيسها بمساحة (٣٠) م٢
- إعادة بناء الجزء العلوي من جدار الواجهة الداخلية للسور الشمالي بحجم (٥) م٣.
- تلبيس حجر بناء لواجهة الجدار بمساحة (١٠) م٢.
- تكحيل حلول حجر البناء الجديد و القديم بمساحة (١٤٥) م٢.

إسم المشروع: صيانة قلعة الكرك

مشرفا المشروع: خالد الطراونة، ساطع مساعدة

العمل والنتائج:

ضمن خطة الدائرة لتأهيل قلعة الكرك نفذ مكتب اثار الكرك مشروع تنظيف وإزالة الطمم المتراكم داخل بعض القاعات وبجانب الجدران في بعض مرافق القلعة، لكشف معالم أثرية اولاً ولفتح ممرات داخل القلعة للوصول إلى جميع مرافقها، وقد أخرج حوالي ٤٥٠ م٣ من الطمم، كشف أثناء إزالة الأنقاض عن جدار أثري بطول ١٥م وإرتفاع ٤م تقريباً، كما أزيلت الأنقاض من برج الحمأة المملوكي وأصبح الآن مفتوحاً أمام الزوار، ومن المعروف أن قلعة الكرك يوجد فيها عدد من المرافق المعمارية المهمه مثل الأبراج الدفاعيه وقاعات الإسطبلات والمعصرة والكنيسة والقاعة الناصرية وقاعة المتحف.

الجدار قبل الكشف

... بعد الترميم

اسم المشروع: ترميم و صيانة قلعة الشوبك

مشرف المشروع: م. محمود عزام

العمل والنتائج:

تركز العمل خلال عام ٢٠٠٧ على إزالة الأتربة والأنقاض من خلف الجدران المتبقية من المدرسة في الجهة الغربية من القلعة وكذلك ترميم أقبية وسقف وجدران البرج الدائري T6 وإزالة الطمم من الموقع المجاور للبوابة الغربية البرج T1 ومن المنطقة المجاورة للكنيسة من الجهة الشرقية والعمل في مدخل القصر الأيوبي من الجهة الغربية والخان المجاور له حيث تم إنجاز الأعمال التالية:

الواجهة الأمامية من المدرسة

الواجهة الغربية من القلعة

١- منطقة المدرسة:

- إزالة وتجريف ٣م٥٦ طمم من داخل الغرف وخارجها .
- تجهيز ٣م١٦حجر بناء ودبش.
- دق وتجهيز٣م١٣ حجر عمار .

٢- البرج الدائري T6

- بناء الجدار الداعم للقبو الشمالي الشرقي للقلعة بمساحة ٢م٢٠.
- بناء عقد لسقف القبو بالحجر والدبش بمساحته ٢م٣٠.
- بناء حجر عمار في سقف البرج الدائري بمساحة ٢م١٥٠ .
- صب باطون ودبش خلف البناء بحجم ٣م١١٠.
- تكحيل واجهة الجدار بمساحة ٢م٦٠٠ .

٣- المنطقة الشرقية المجاورة للكنيسة:

- ازالة وتجميع وفرز ٤٠ م٣ حجر بناء.
- تجريف٢٣٥٠ م٣ طمم من الواجهة الشرقية.

٤- المنطقة المجاورة للبرج T1 :

· إزالة وتجريف ٦٠٠م٣طمم.

٥- القصر الأيوبي والمناطق المجاورة

(التعاون مع الفريق الإيطالي) :

· تجريف وإزالة ١١٠ م٣ طمم من مدخل الواجهة الشرقية.

· إزالة وتجميع وفرز ونقل ١٥م٣حجر بناء.

· العمل مع الفريق الايطالي في دراسات المسح الجيوفيزيائي للقلعة.

· إخفاء الباطون الظاهر فوق سطح البرج T7 وتغطيته بالطمم بحجم ٤م٣ .

الخان المجاور للقصر الأيوبي

أسم المشروع: تنقيبات ساحة الخزنه

مشرف المشروع: سامية الفلاحات

العمل والنتائج:

نقب في مربعين في الجهة الجنوبية من واجهة الخزنه، وقد ظهر طبقات طمي ورواسب في الجزء العلوي، إقتصرت اللقى الاثرية على بعض الكسر الفخارية التي تعود للفترة النبطية وظهر في المربعين أرضية مبلطة ببلاط مربع الشكل من الحجر الكلسي، قياس البلاطة «٤٥×٥٥سم».

ارضية مبلطة

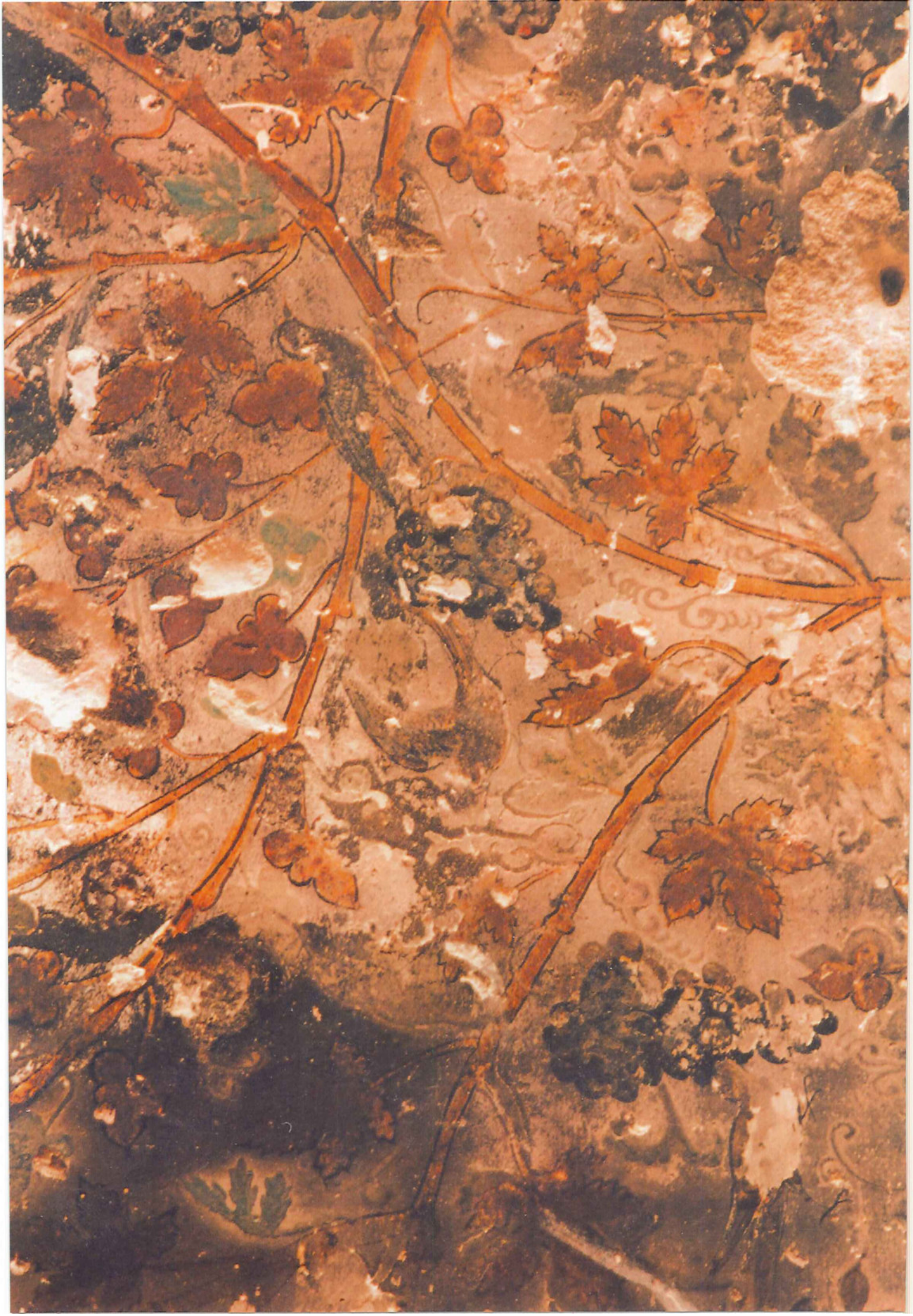
اسم المشروع: مشروع ترميم قلعة العقبة
مشرف المشروع: م. اسماء شحالتوغ

العمل والنتائج:

يأتي هذا المشروع استمراراً لأعمال الصيانة والترميم في المواسم السابقة، وتركز العمل في هذا الموسم في الجدار الغربي من القلعة لمعالجة التآكل ومنع الإنهيار في العقد والركبه وإزالة الطمم المتراكم أعلى العقد. حيث عولج سقف القصر ودعم بالمونه وإعيد تشريك حجارة الركبة مع الجدار والعقد وحقن الفراغات والشقوق بالمونه اللازمه لزيادة ترابطها.
و ترميم الجدار بفك الجزء المعرض للإنهيار بطول ٧م وإرتفاع ٣ م تقريباً وإعادة بناءه باستخدام مونة وملاط مناسب وإعادة تكحيل لكامل الجدار.

تقوية الأساسات

معالجة وترميم سطح العقد



example, the precision of a 1 x 1 m probe in the ash layer adjacent to the structure (fig. 3) is very suspect. Also, the ancient cemetery associated with the site has all but been destroyed in recent years (fig. 4). Khirbat as-Sfaysif, meanwhile, has also fallen victim to illicit digging, but the greatest threat to the site is that it is slowly eroding into the adjacent wadi. Large-scale conservation efforts would be required to prevent further destruction at the site. The results of these inspections made it very apparent that both sites should be sampled next summer as part of a comprehensive campaign to examine the trade through the region in the Nabataean and Roman periods along the ancient Spice Route. Accordingly, this plan is now a major objective of the Bir Madhkur Project.

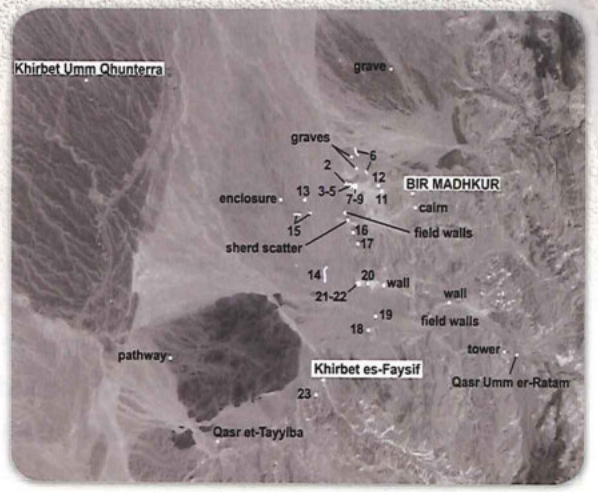


Fig .2: Regional showing results of the 2003 season of the BMP survey.

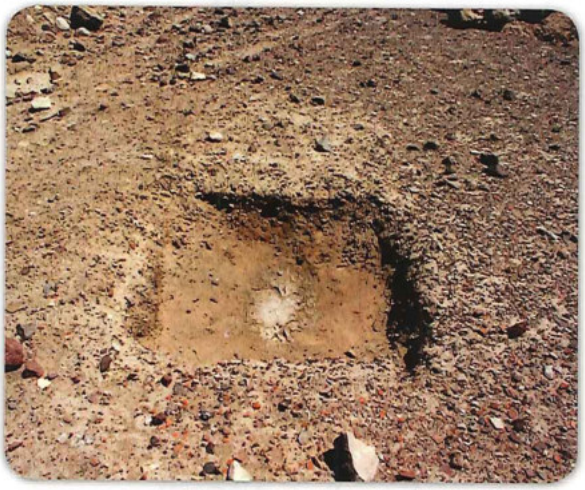


Fig .3: Image showing illicit excavation at Khirbat al-Qantara.

Fig.4: Image showing illicit excavation at Khirbat Umm al- Qantara cemeteries.

Bir Madhkur

Project Name: Bir Madhkur Project 2007 .
Duration:Two Weeks 9/8 - 21/8/2007
Sponsor: Dowling College
Director: Dr. Andrew M. Smith II
Representative: Mohammed al-zahran

In August 2007 I engaged in a field/study season at Bir Madhkur and in its territory (Fig. 1) in order to plan for a full season of excavation and survey that will commence in June, 2008. While I conducted limited fieldwork to discover and document new archaeological sites or features between Bir Madhkur and Petra, my time was largely spent ironing out the logistics for next summer and developing a project plan that would ensure the long-term conservation and management of the site. Also, I took the opportunity to re-examine pre-existing archaeological sites and features that the project will likely target next summer, largely to assess their state of preservation and to determine what sites were in greatest need of excavation and conservation, as well as to photograph sites that I hope to publish in an article in the 10th volume of the *Studies in the History and Archaeology of Jordan*. I will comment about these sites below.

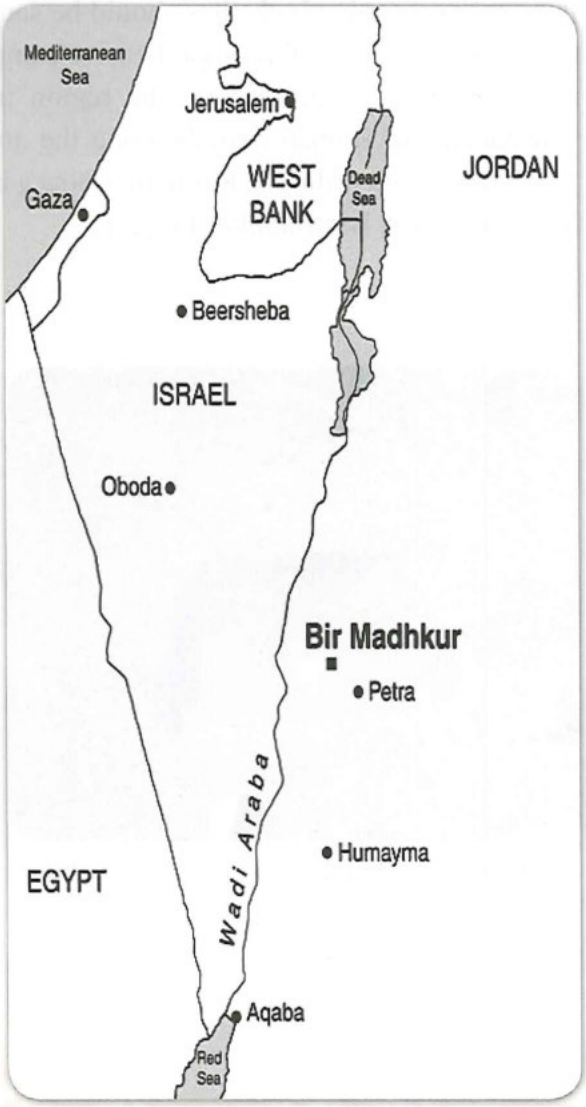


Fig.1: Regional map showing location of Bir Madhkur.

As mentioned, a major goal was to inspect archaeological sites, in addition to Bir Madhkur, that I would like to sample next summer. Three sites in particular drew my attention. These are the caravan stations of Khirbat Umm al- Qantara , Khirbat as-Sfaysif, and Qasr Wadi at-Tayba (fig. 2). The sites most threatened and in need of excavation and conservation are Khirbat Umm al- Qantara and Khirbat as-Sfaysif. Since I first discovered Khirbat Umm al- Qantara several years ago, the site has been visited by various individuals and their illicit activities are quite apparent. For the most part, most of the damage to Khirbat Umm al- Qantara seems to be the result of haphazard illicit digging. However, there is evidence that some of the digging was less-haphazard and more purposive. For

securely established on the offshore island, a bridgehead on the mainland seems necessary to organise efficient military control. Saladin understood this necessity and a Crusader presence in Ayla may help explain why Saladin and his political elite decided to abandon Ayla in favour of establishing a new settlement further south at Aqaba Castle. Under the current structures, the Aqaba Castle Project has uncovered an early phase of a fortification (tower ?) with 1.30 m thick walls which has tentatively been dated to the time of the Third Crusade by C14 charcoal dating. This construction was replaced by a first fort probably to be dated to the late 12th or 13th century. Its east wing lies under the present courtyard of the castle at several meters deep. In the 14th/15th century a khan replaced the former which had probably been destroyed during an earthquake. Earthquakes must have devastated this khan too. The archaeological research shows that the site was abandoned for some time. After raising and levelling the site, the Mameluks constructed a new khan, in the early 16th century, of which the gate is still standing. The builder was sultan Qansawh al-Ghawni (1510-17) whose name appears in the monumental inscription that encloses the outer iwan of the gatehouse. Later on the current polygonal towers were added and more rebuilding gradually changed the form of the khan until the 1840s when the Egyptian Mohammed Ali ruled over Aqaba and the khan became a military fortress adapted to artillery. The Italian ships that bombarded the fort during the Turkish-Italian War (1911-12) caused a lot of damage that probably was just restored when the British and French (1914-17) naval bombardments destroyed large parts of the fortress.

Conclusion

After six seasons of fieldwork, we can rewrite the history of the site of Aqaba Castle that has a much longer occupation than was known before the archaeological research started. The new fascinating data incite further research.

From a 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 a scientific point of view, further excavations in the courtyard would be most interesting for our knowledge of the site.

location of the Crusader castle that Saladin captured in 1170 and subsequently rebuild was on the island of Jazirat Fara'un. 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, have a later Mamluk layout, although 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.

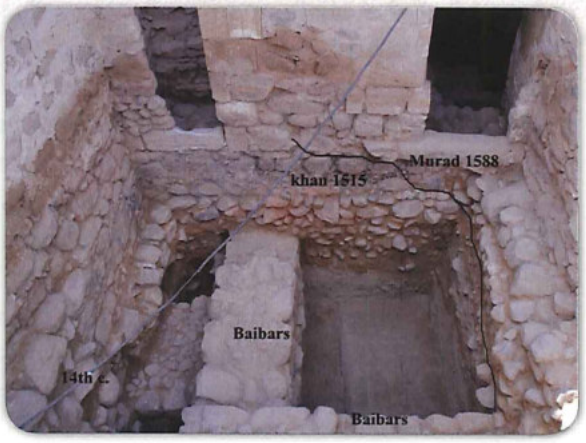


Fig.3: 12th and 13th century buildings deep under the courtyard of Aqaba Castle

The results of the 2007 fieldwork

The 2007 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 Crusader presence is still difficult to prove, although in 1183 the particularly dreaded Frankish commander, Reynald de Chatillion, organised a raiding party against the holy city of Mecca, which sailed from the Aqaba stronghold. This offensive was intercepted by Saladin's troops who prevented such an attack.

What is becoming more and more clear is that after Saladin took the castle of Jazirat Fara'un and rebuild it, he must have constructed a stronghold on the mainland too. Although the main stronghold was

Fig.4: 13th to 16th century buildings in the south-west corner of Aqaba Castle

ʻAqaba Castle

Project Name: Aqaba Castle Project
Duration: 27/1 - 22/2/2007
Sponsor (s):Archaeologia Mediaevalis (Belgium, private sponsoring), UMR 5648 du CNRS (Lyon II, France) and the Ministère de la Région wallonne (Belgium), in collaboration with the CBRL (Great-Britain) and the Universities of Ghent (Belgium), Copenhagen (Denmark) and Toronto (Canada)
Director: Johnny De Meulemeester - Reem al-Shqour
Representative: Sawsan al-Fakhri

An international team of archaeologist worked for four weeks in the famous castle of Aqaba, the starting point of the Arab Revolution in 1917, when Arab troops took it from the Turkish army. The "Aqaba Castle Poject" is a joint Belgian-French-Jordanian project financially supported by the Division du Patrimoine du Ministère de la Région wallonne (the Heritage department of the Walloon Government in Belgium) and the French research Centre (CNRS, UMR 5648 in Lyon), under the direction of Prof. Dr. Johnny De Meulemeester and Dr Reem al-Shqour (University of Ghent, Belgium) with the logistical and scientifical collaboration of the Department of Antiquities represented by the Aqaba Office director, Sawsan al-Fakhri. International support comes further from archaeologists of the universities of Ghent, Copenhagen and Toronto.

Fig.1: 12th and 13th century buildings deep under the courtyard of Aqaba Castle

The aims of the project

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 main aim of this field season is to undertake an archaeological assessment of the forts and khans in ʻAqaba prior to the actual castle and to get a better idea about early Islamic settlement outside the town of Ayla.
The team consists of 12 archaeologists; 24 labourers were recruited locally to help with the excavation. Aqaba was occupied briefly by the Crusader 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

Fig.2: 13th to 16th century buildings in the south wing of Aqaba Castle

2. Identification of ongoing damage
3. Identification of vulnerability of paintings due to the damaging impact of previous conservation.
4. Analysis of the paintings organic components through multi-spectral investigations
5. Stabilization of the most vulnerable areas of painting
6. Cleaning and repair of non-painted plasters

During the final phase of the project, the focus will shift to improving access to the Biclinium, interpretation of the painting, and monitoring and maintenance issues. As well as protecting this unique example of Nabataean painting, the project also seeks to attract a greater number of visitors to Siq al Barid and to increase their dwell time in the area which will generate much needed income for the Amarin community residing in Bayda.

In the long term, this project will help to create a strategy for the preservation of similar wall paintings and plaster decoration in Petra.

Preservation and conservation of the paintings is conducted under the management of the Petra National Trust in partnership with the Department of Antiquities and a team of specialists from the Courtauld Institute of Art in London, one of the world's leading institutes for teaching and research in the history of art and conservation. In December 2006 the Courtauld Institute specialists visited Siq al-Barid to assess the wall paintings and discuss future conservation planning. Their examination determined that the deterioration of the wall paintings was caused primarily by intentional damage (graffiti and attempted theft of a section of the ceiling painting); incidental damage (fire damage, other effects of habitation, and biological activity); and previous conservation intervention (application of a glossy coating to a number of the figures and birds).

Fig.2: Surviving painted plaster showing evidence of intertwining plants and animals that decorate the vault

The three-phased project aims at conserving the wall paintings through cleaning, where appropriate, and consolidation to prevent further losses of the precious historic fabric. The project will look at suitable stabilisation work, cleaning and aesthetic treatment of losses such as soot reduction, removal of modern graffiti and retention of the Mamluk graffiti on unpainted areas, investigating the causes and nature of the deterioration, and documentation and archival research that will be undertaken throughout the project.

During Phase I, which took place over 4 weeks in July 2007, the conservators concentrated on the overall presentation of the paintings scheme, the graffiti on the lower walls of the vaulted recess; removing sooty deposits on the exterior walls and removing the greasy deposits on the interior surfaces. The conservators also carried out tests on painted areas to assess what kind of conservation work would be possible in successive phases. A great deal of progress was made on the cleaning of the surfaces and on the stabilization of the lime plaster.

The major outcomes of Phase 1 include:

1. Recording of previously undocumented painting on the recess walls. The recording of the wall paintings has contributed significant new information about the original appearance.

Conclusions:
The southern part of Wadi Ramm is much more complex in terms of its history than the Nabataean and late Ottoman periods that are in today's public awareness. Hunter-gatherer, Paleo-Bedouin and Bedouin presence in the valley goes back several tens of thousands of years, and little information about the lives (and deaths) of the people of these times is known at all. The Trayf al-Maragh research has demonstrated the rich opportunities that exist to enhance our understanding of these elusive groups, and a wider geographic range of more intensive investigation is clearly demanded.

Recommendations:
A continuation of the Trayf al-Maragh project is obviously necessary, including the excavation of representative samples of the structures to obtain a clear dating framework for the various kinds of buildings that occur in the embayment and in the greater Wadi Ramm area, including the larger open-air sanctuaries that have been known for more than 60 years (Kirkbride and Harding 1947). The 2007 team was small, but additional seasons of research must include greater numbers of excavators, surveyors, and experts, including human osteologists, paleoenvironmentalists, and geomorphologists.

Fig. 4: Multi-chambered Feature 3, view towards the north. An uncleared U-shaped structure is at the upper left. (Photo: G. Rollefson).

Touristic benefits:
In the near future, museum exhibits in Amman, Aqaba, and in Wadi Ramm itself would increase the appeal of Wadi Ramm beyond its raw geographic beauty to an intriguing explanation of the ways people have used the stark and (to many outsiders) "forbidding" desert to prosper from generation to generation over tens of millennia.

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60 cm or larger) unhewn stones, including granite but consisting principally of sandstone; the space between the stones was generally filled with small cobbles and gravel (Fig. 1). The alignments were a single stone deep (and thus were clearly not walls or water control elements), and as a consequence of subsidence of underlying sands, the surfaces of the alignments were very irregular. A curious aspect of the alignments, which might be interpreted as "pathways," was that they suddenly appeared and suddenly ended, evidently leading from and to "nowhere."

Fig. 2: U-shaped structure, view towards the N. The large stone at lower center at one time was upright. Note the paved area to the left. (Photo: G. Rollefson).

2. U-shaped structures. These were among the most numerous structures, and although the two we managed to clear of drift sand were both oriented directly N-S, others were oriented to many other directions. The two cleaned structures measured approximately 2 x 2 m for the interior space and included walls made of unworked stone set on end or edge (Fig. 2). Along the western edge of both of the closely inspected structures was an area that was paved with thin tabular slabs of sandstone. One of these structures (Feature 1), oriented towards the south, may be an Early Islamic "gibla" to orient faithful Muslims toward Mecca during their prayers.

3. Tombs. Large (c. 3-7 m maximum dimension) cairn tombs were also present, although they were not numerous. Smaller cairn tombs also existed, as well as narrow rectilinear stone enclosures (2 x 0.75 m) oriented E-W, sometimes with a headstone at the western end, that probably date to the Islamic period.

Fig. 3: Feature 7, a rectangular structure, and its pavement at the northern end of Feature 5 "pathway"; Feature 8, another rectangular structure, is at top center. (photo: G. Rollefson).

4. Rectangular structures. Apparently the least numerous, these enclosed spaces (c. 2 x 2m and larger) were sporadically set off by stones set on edge or on end; it is possible that these walls (as well as the pathways) were "robbed" of stones for use in the construction of other structures in the Tref al-Marrar sector, especially tombs. One of these structures (Feature 8) interrupted the longest of the three stone pathways (Feature 5) near its center, and another (Feature 7) truncated the same pathway at its northern end. Feature 7 also included a relatively elaborate pavement of unworked small stones and tabular slabs on its western and northern sides (Fig. 3).

5. Other. A unique structure (Feature 3) included an arc of standing stones at its northern end (Fig. 4). The edifice was more than 5 m long, and its western half was subdivided into four small chambers of variable size, including one that was covered with a single slab of stone that measured c. 75 x 85 cm. The southern-most chamber, which measured only c. 40 x 40 cm, included a small slab-lined channel that led from the interior of the chamber to the exterior of the entire structure at its southwestern corner.

Rock-cut room at western corner of the complex

Since the first travellers visited and described the remains of the Wadi Farasa East, the exact function of this room (no. 4 on fig. 1; fig. 4) has not been clear, mainly due to the fact that its surface was completely filled by the remains of goat and sheep and secondary dwelling activities and its doorway blocked by a series of stones.

It became clear when cleaning the surface of the inner room that rock-cut benches followed the walls on three sides of the room. Without any doubt, this room used to function as a small triclinium or banqueting hall. The function of the room is further confirmed by the finds inside and also outside the room. The excavated layers contained a quite significant amount of pottery. Preliminary analysis suggests this mainly belongs to the 2nd century AD and consists of drinking cups, cooking pots and substantial quantities of transport amphorae.

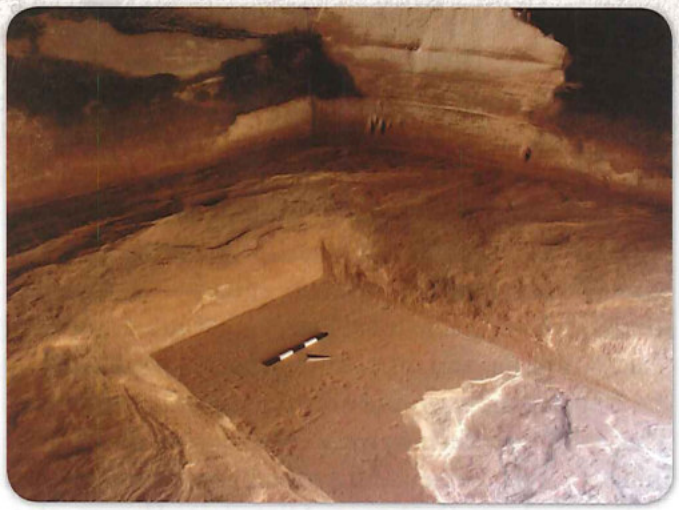

Fig.4: Wadi Farasa East, entrance to rock cut triclinium in SW-corner of the complex (Schmid)

pottery. As in previous years, it was observed that most of the initial floor slabs were already missing when the colonnade collapsed, but the foundations for the slabs, consisting of smaller, flat stones and clay containing earth not only remained in situ but indicated a clear pattern of how the slabs were outlined (Fig. 2).

NE-corner of complex and entrance to the huge triclinium

Several walls constructed in a rather careless technique had begun to be visible in 2006 (for location see no. 2 on fig. 1). They obviously form two rooms as well as a kind of a corridor belonging to the medieval (11^{th} – 13^{th} centuries AD) occupation of the site. This year, another room was exposed, built directly towards the rock on its northern and eastern sides (Fig. 3). As clearly indicated by the collapsed remains and by the two remaining supports, the room initially was covered by an arch spanning in east-western direction.

Fig.3: Wadi Farasa East, Medieval rooms on NE-corner of the complex (Schmid)

To the east of the previously mentioned structures, other walls belonging to same building phase continue in direction of the huge triclinium belonging to the Soldier's Tomb complex. At least one additional room started appearing and it seems as if the same row of constructions once continued all over in front of the triclinium. Since the central main entrance to the triclinium was cleaned in the 1930s by the then Department of Antiquities of Transjordan, and, therefore, no additional information can probably be obtained from that spot, it was decided to carry out a small sounding at the area of the southernmost lateral entrance to the triclinium.

Although being rather small and not completely finished, the sounding revealed a succession of several phases within that narrow spot. To the initial functioning of the Soldier's Tomb complex must belong a series of steps leading from the triclinium downwards in direction of the courtyard. This feature makes perfect sense, since the floor of the courtyard is at a level of 930.61 m asl (floor slabs included). The levels inside the triclinium are of 931.58 m asl for the central part of the floor while the first step excavated this year is at 931.89 m asl and, therefore, a difference of 1.28 m had to be by-passed by these steps. In a next phase the door was partially filled in and the threshold must have been raised by almost one meter. When exactly this happed could not be determined so far and for the time being, the reason for this change remains also enigmatic. Maybe these changes were already meant to prevent water from winter flash-floods which would, then, indicate that already in late antiquity the water management systems of the Wadi Farasa East were no longer properly working. In the next phase the space immediately in front of the southern side-door was occupied by an important structure, possibly something like a podium, using big stones positioned on a level of clearly reused smaller stones, some still showing traces of wall plaster.

related to the healing aspect of the goddess, through the use of natural pool.
The site can be visited on the way to Jabal Harun, although its touristic potential is low, because it is not spectacular. Because of its importance for the history of Nabataean religion, the site should be preserved from vandalism; natural rock decay is also a concern.

Fig.3: Nabataean graffiti are engraved in the lower part of the wadi, on the southern wall, just before the fall.

Fig.4: The upper part of the wadi bed, forming a natural pool.

Wadi Waghit-Wadi abu 'Ullayqa

Project name: Archaeological and Epigraphical Survey of Wadi Waghit, Petra
Duration: November 17 to November 25, 2007
Sponsor: CNRS, Paris and École Pratique des Hautes Études, Paris-Sorbonne (France)
Directors: Marie-Jeanne Roche (UMR 8167, CNRS, Paris; ÉPHÉ, Paris-Sorbonne); Fawzi Zayadine
Representative: Ms Hyam Twaysi

The site belongs to the Petra Archaeological Park, and is located at the foot of Jabal Harun, in the South West of Petra, about 5 km from the Qasr al Bint at 356°N-S/732°E-W. This season, we continued our research on the upper part of Wadi Abu 'Ullayqa, on both sides of the wadi bed. Wadi Abu 'Ullayqa is a tributary of Wadi Waghit, which runs down to the Wadi 'Araba on the eastern side of the Jabal Harun. It is located along the ancient road leading to Egypt, via the 'Araba and the Negev, and passing west of the Jabal Harun. We began to explore the lower part of the wadi, coming from the wadi Waghit; there is no possible way to cross the break in slope which separates the wadi Abu 'Ullayqa into two different parts.

Fig. 1: A view from the North of the upper part of the Wadi Abu 'Ullayqa.

Our main goal this year was to check inscriptions already visited in 2005, in the upper part of the wadi, and to begin the survey of the lower part.

The main monument of the site is an Isis statue in a niche, already published. The rock-cut sanctuary is partly built. An unpublished Nabataean inscription of three lines, located in the hill above the statue refers to it. Across the wadi bed is an open-air biclinium, with a few Nabataean graffiti, and several rock arts on the surface, representing foot and ibex. The lower part of the wadi has a small rock-art sanctuary covered by graffiti on both sides. Among the graffiti, some are carved by professional scribes, and other drawn by less expert hands. The onomastic reveals that visitors of the sanctuaries were native worshippers, of Nabataean origin. The site is therefore a truly Nabataean holy place, although it is dedicated to Isis. The cult was probably

Fig. 2: An open air biclinium on the North side of the wadi bed: Wadi Musa is visible from the bench.

It consisted of two oblong to semi-rectangular rooms and a large communal forecourt (Fig 3). Although the masonry retaining walls themselves stood on a chalky limestone layer extending ca. 1 m below the ground surface of that time or the upper surface of Layer 4, the floor was dug further down to a solid limestone bedrock layer. This made the floor depth very large (more than 2 m), probably the maximum value among Neolithic semi-subterranean structures ever found in Jordan (Fig 4). The walls were substantially inclined inwards due to strong sideways soil pressure and often supported with buttress walls again made of limestone boulders. Since the floor depth was unexpectedly great, the full excavation was limited to the eastern half of the structure. The western half is due to be investigated in the next season.

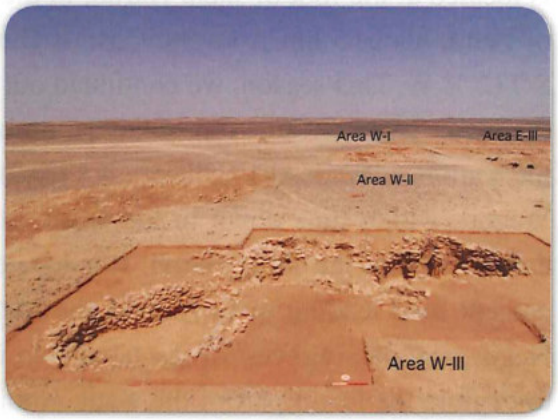

Fig.4. The eastern wall of Structure M.

As was the case with PPNB settlement sites, the finds from Wadi Abu Tulayha consisted largely of chipped flint implements and groundstone artifacts. The flint artifacts were based on the naviform core and blade technology, a hallmark of PPNB flint industries, and included a variety of tools such as points, sickle blades, burins, side- and endscrapers, drills, notches, denticulates, and heavy-duty digging tools (Fig 5). What characterized this assemblage was the predominance of hunting weapons, which highlights that, along with herding and cereal cultivation, hunting of wildlife was among major options of the subsistence strategies of the outpost.


Fig.5. A flint artifacts from Area-III.

The vast majority of groundstone artifacts were basin querns and grinding slabs, both made either limestone or flint slabs . The other stone products included plinth stones, stone bars diagonally truncated at both ends, stone vessels, game boards, whetstones, an arrowshaft-straightener, and pigment pallets. In addition, a small number of miscellaneous objects occurred such as shell and snail adornments, small clay objects, and various pigments. Bone tools also occurred in small quantities. The site also produced a large number of faunal and floral remains, which are now in analysis.

Wadi Abu Tulayha PPNB outpost is the first to provide a specific key to tracing the process of the pastoral nomadisation, an essential issue for the Near Eastern archaeology as well as that of Jordan. Although the investigations provided suggestive data sets, the outpost itself is yet to be fully excavated. The sixth and final field season is scheduled in the next spring or summer.

Wadi abu Tulayha

Project Name: Wadi Abu Tulayha: A PPNB Agropastoral Outpost in the al-Jafr Basin, Southern Jordan
Duration: 29/7 - 13/9/2007
Sponsor: Kanazawa University, Japan
Director: Sumio FUJII
Representative:Mohmmed Abdelaziz Marahla and Talal Al-Amareen

Wadi Abu Tulayha is a small composite site lying in the northwestern part of the al-Jafr basin in southern Jordan. It was first found during our 2001-2002 winter season survey and thus far investigated four times, in the spring and summer field seasons of 2005 and in those 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 overlying it, and a PPNB barrage system constructed along a small tributary wadi flowing eastward across the southern edge of the site. Faunal and floral analyses suggested that the outpost was based on a mixed economy consisting of hunting largely of gazelle, transhumance bringing domesticated sheep and goats from a parent settlement probably to the west, and small-scale basin-irrigated agriculture utilizing the neighboring barrage system. It seems that such a multiple, risk-diversifying subsistence strategy first made it possible to infiltrate deep into arid peripheries such as the Jafr basin. What is important is that the outpost represents a transitional stage from transhumance to pastoral nomadism and, therefore, holds a key to tracing the development of pastoral nomadisation in this region. This is the reason why we have long been engaged in the investigation of this small site isolated in the middle of al-Hamad.

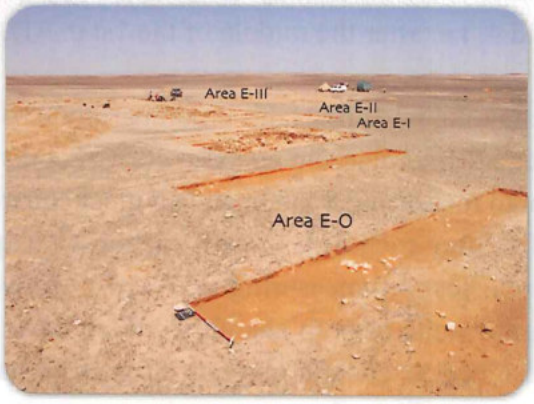

Fig.1: Structural remains at Area E-III.

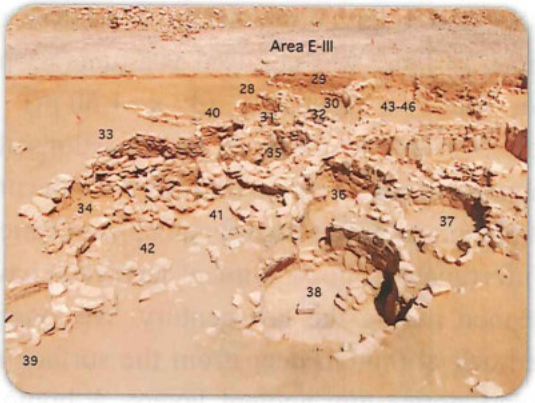

Fig.2: A structural complex at Area E-III.

This season opened four operation areas with a view to making the overall picture of the outpost clearer. The excavation at Area E-III has revealed a few dozen stone-built, semi-subterranean structures of various dimensions and layouts (Fig 1). They formed a structural conglomerate without any core feature. Nevertheless, some of them were connected with each other through a narrow passage fringed with a pair of upright stones, thus forming a small complex (Fig 2). The complex usually included a storage area paved with limestone slabs as well as normal living space equipped with small hearths.
Also of interest was a large composite semi-subterranean structure that was revealed at Area W-III.

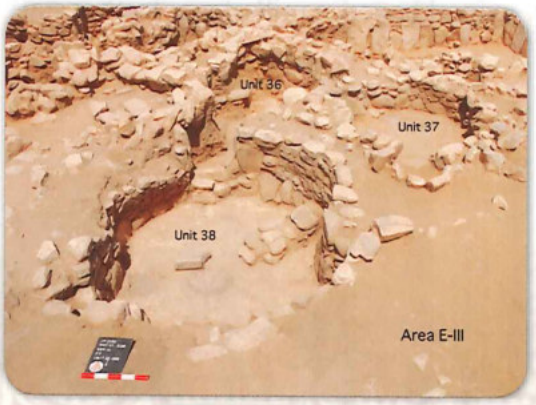

Fig.3: Structure M at Area-III.

rectangular magnetic anomaly that we had seen on the radar image c. 1.30m from the surface, except levels of stone ballast and boulder. Then, there was a homogeneous layer of red sand mixed with many sherds of Nabataean, Roman and Byzantine pottery until we found the bedrock at 1.80m. Nabataean sherds were essentially dated to Schmid phases 3 and 4, i.e. after the middle of the 1st c. AD.

Sounding n° 3: Al-Habis columbarium n° 395

Petra's columbarium consists of two rooms: a first room measuring 8 x 5 m and an inner square room of 4.30m each side. Small niches of a quarter-circle section, measuring 0.27 x 0.17 m were cut in the walls of both chambers. Were those niches designed to contain cinerary urns or to hang out pigeons ? First, they seem to be too small to have received urns. Secondly, we have no evidence for ash found in the columbarium. Moreover, the city center of Petra was not used as a funerary place.

We made a sounding (3 x 1.50 m) in the columbarium to clear up the questions that the monument raised and to find clues for the presence of pigeons during a significant span of time.

Unfortunately, the monument seemed to have been cleaned during the last century. We reached the bedrock at 0.60 m deep from the surface and we didn't notice any ancient layers. A homogenous layer of beduin occupation was found characterized by animal bones, a mill-stone, leather staff, etc.

Fig.3: Imported objects such as glass beads , bone figurine ...ets

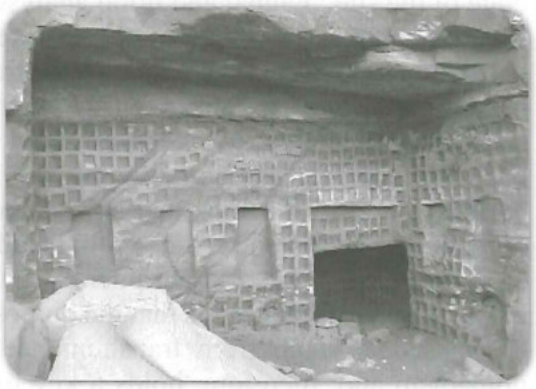

Fig.4: Al-Habis columbarium n° 395

Umm al-Biyara and al-Habis

Project Name: SFAP- Study of the funerary areas in Petra
Duration: 2 weeks 26/8 - 6/9/2007
Sponsor: French Ministry of Foreign Affairs
Director: Christian Augé and Isabelle Sachet
Representative: Suleiman Farajat

Three soundings have been made in Umm al-Biyara and al-Habis as part of the research program, entitled "SFAP - Study of the Funerary Areas in Petra".

Soundings n° 1 and 2: Umm al-Biyara (tomb n° 361)
In 2005, a team composed of Rémy Chapoulie, Michel Martinaud, Michel Frappa (geophysicists, universities of Bordeaux 1 and 3) and Isabelle Sachet (archaeologist, Collège de France) made a geophysical survey with a GPR (Ground Penetrating Radar) in the courtyard of the tomb n° 361 in the Umm al-Biyara necropolis to determine whether buried walls were visible with the help of the radar.

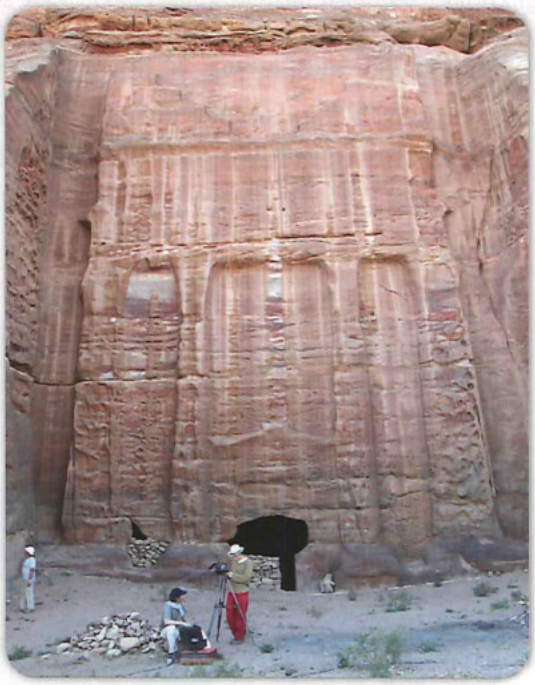

Fig.1: Umm al - Biyara (tomb n° 361).

In 2007, an initial sounding (2.5 x 2.5 m) was made in the middle of the courtyard where an electromagnetic anomaly was visible around 1.50m below the surface. First we found medieval levels with layers composed of sand, ash and pottery. Then, at a depth of 1.50m, we found a pile of stone that we associated with the anomaly we had seen on the radar image. Afterwards, we found homogenous layers of Nabataean, Roman and Byzantine ceramics until we reached the bedrock, 2.10 m down from the surface.
A second sounding (3 x 3.5 m) was dug in the south-west corner of the courtyard according to a rectangular anomaly that we had noticed on the radar image. We first found a thick layer of ash mixed with a lot of medieval pottery and very few Nabataean sherds. That layer included imported ceramic and objects of good manufacture such as glass beads, two bronze rings, a bone figurine, stone objects, a glass weight and coins from Nabataean, Roman and Islamic times. Nothing was found that explained the

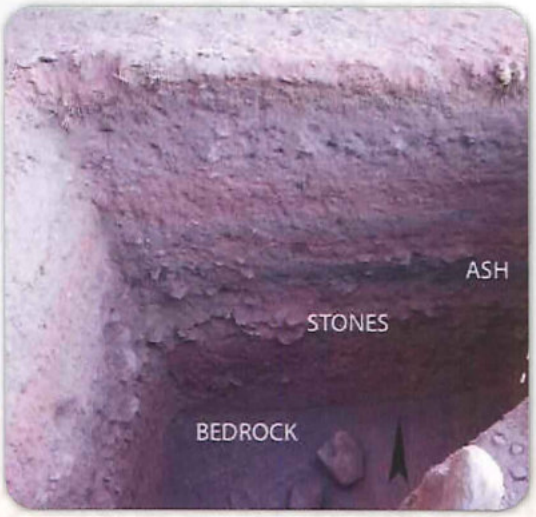

Fig.2: Tomb n° 361: Soundings n° 1

Jabal Numayr/ Petra

Priject name: Obodas Chapel Project.
Duration: 4 weeks (June 29th – July 26th 2007)
Sponsor: French National Scientific Research Center (CNRS).
Director: Laurent Tholbecq
Representative: Mohammed Salameen.

The 2007 season focused on the following areas:

- The southern area of the complex (PN2007.21000).
- The built triclinium (PN2007.23000).
- The eastern hall (PN2007.22000).
- The north-western complex (PN2007.18000).

The objectives were the following:

- To complete the 1:20 scale top-plans of the complex.
- To complete the recording of the architectural and archaeological sections.
- To study the architectural fragments.
- To understand the layout of the south-western area of the complex.
- To study and date the built triclinium.
- To remove part of the destruction of the northern complex.

All these objectives have been reached.

General overview of the complex towards the south-west.

site. It can now be confirmed that the Byzantine monastery at the site was preceded in time by a Nabataean architectural complex which included a shrine or temple, water reservoir, some rooms and surrounding walls. That complex shows a clearly different orientation (NE-SW) than that of the succeeding Byzantine monastery (N-S). It is most probable that the Nabataean complex originated in the Ist century Bc./ AD., continued throughout the Roman period and was then incorporated in the Byzantine monastery built in the later 5th century. This information, together with previously collected data at the site, will be particularly significant in the preparation of the final publication of the *FJRP*, the first volume of which should appear in a few months.

The results of the *FJRP* investigations stress the importance of the Jabal Harun site for the history of archaeology of Jordan. This site, so important for the history of Judaisn, Christianity and Islam, as well, as in the perspective of the Nabataean history and religion, existed, probably without a major interruption, for well over 1000 years and it produced a wealth of archaeological data and material culture remains. It should also be recognized that in addition to the apparent religious significance of the site, it possesses a tremendous potential for the development of tourism: the wild yet spectacular landscape, enchanced now by the discovery and exposure of a large ancient site.

condition and properly maintained. The houses are mainly used for animal husbandry and farming storage facilities. As community -related village installments we documented at least three *Tabun*-houses, a school and a shop.

The recent traditional village architecture is also a specific source for comparison with PPNB architecture of southern Jordan for the reconstruction of Neolithic architecture (Gebel, Nissen & Zaid 2006).

Tourism Aspects & Recommendations

The Neolithic site of Basta is part of the Neolithic Heritage Trail planned from Wadi Faynan to Basta. Therefore we understand that part of our fieldwork in the old village of Basta is to raise heritage awareness among the locals. The heritage of Basta covers several periods, including the Neolithic, Nabatean, Byzantine and Ottoman periods. The sub-recent vernacular architecture of the old village of Basta, shows the characteristics of the building tradition in semi-arid mountain areas along the 30th degree of latitude (Adam 1981). In this case they belong to the same building type as the PPNB architecture in the region. The traditional architecture is well adapted to the extreme climate variations of the semi-arid mountain area and should be shown to visitors as an example for sustainable building technology.

Nissen during the fieldwork of the Basta Joint archaeological Project. In this way it is now possible to compare the progress of dilapidation of traditional rural architecture within the last two decades. Information on dilapidation processes can help the understanding of archaeological findings in the context of vernacular architecture during the Neolithic and Nabatean periods. The objectives of the season were the preservation of information on old village architecture with related socio-cultural data for Southern Jordan and to raise the heritage awareness among locals during field work. Our documentation should provide a basis for comparative studies (with the Early Neolithic village architecture of LPPNB Basta, and other vernacular architecture of central and northern Jordan). The results of our investigations in Basta will be published as a supplement volume of the Basta final publication.

Areas Explored this Season, Significant Results and Conclusions

The houses in the traditional village architecture of the Petra area are rectangular and erected with the local lime (and sand) stone, sometimes covered with mud on the inside and outside, although often only the inside is plastered. The wall stones in Old Basta were taken from older structures in Basta, possibly the Neolithic site and/or the Nabatean site on the opposite side of the Wadi. Walls butt bluntly against each other and are not really connected in the corners. In the old village of Basta the characteristic arch of Jordanian village houses is often present. In some cases the arch is replaced by one or two walls that minimize the span at certain parts of the building. The flat roof consists of a number of layers. Wood cut from juniper or old railway sleepers were used for the roof beams. Reed, branches and brush were placed across the beams, covered by thick layers of mud, which had been stamped down hard. In the layers of mud are embedded cobble-sized stones. Some roofs are covered by cement plaster and crushed stones. The traditional architecture of the Petra region is predominantly windowless. Only small wall openings for air circulation are common.

Fig.3: Bayt Abu Khadra Al-Naimat, Interior of unit 1.7 (photo: B.J.A.P.).

During our fieldwork we collected socio-architectural information related to the village history. These information covers following aspects: (a) house owner, (b) functional and spatial analysis of the house units, (c) use of material and construction methods, (d) sources and procurement of building materials and (e) village history. The original purpose in building the old village of Basta was to have a place for storing tools, goods, and cereals. Later some other reasons (e.g. school, military services, etc.) forced the people to use the houses for "domestic" purposes. Our documentation shows the enormous changing processes in the old village of Basta. At least 22 Units are now ruined, or vanished completely in the last twenty years. The absence of maintenance of the roofs is the main problem for dilapidation beginning. Most of the currently used house units (around 30) are in good

Basta/ The Old Village

Project Name: Basta Joint Archaeological Project
Duration: June 4 – June 25, 2007
Sponsor: German Research Association
Directors: Dipl. Moritz Kinzel and Dr. Zaydoon Zaid
Representative: Amer Al-Budur

Location, Historical Background, Objectives of Season

The traditional Old Village of Basta, build in the early 20th century, is located some 14 km SSE of Wadi Musa, and around 20 km WNW of Ma`an in Southern Jordan. Basta is well known for its Neolithic site and the well preserved LPPNB architecture (Gebel, Nissen & Zaid 2006).

The aim of the three weeks fieldwork was to complete the socio-architectural documentation of the old village which took place between 1987 and 1989 during the excavation fieldwork of the Basta Joint Archaeological Project (B.J.A.P.). Therefore we made an architectural and photographic documentation which included following elements:

1. An actual site plan of the old village measured with a total station, including non-house village features.
2. Floor plans of each unit with build-in features, section-information and functional analysis.
3. All wall openings: doors, windows, niches, air circulation openings, etc.
4. Detailed documentation of construction elements as roofs, arches, drainages, etc.
5. Dilapidation study: Comparative study based on the photo documentation from 1987 to 2007.
6. Notes on necessary conservation needs of each unit in the documentation file.

The photographic documentation includes all above mentioned structures and components of the old village of Basta. We took all pictures from the same perspectives as those taken in 1987-1989 by Margret

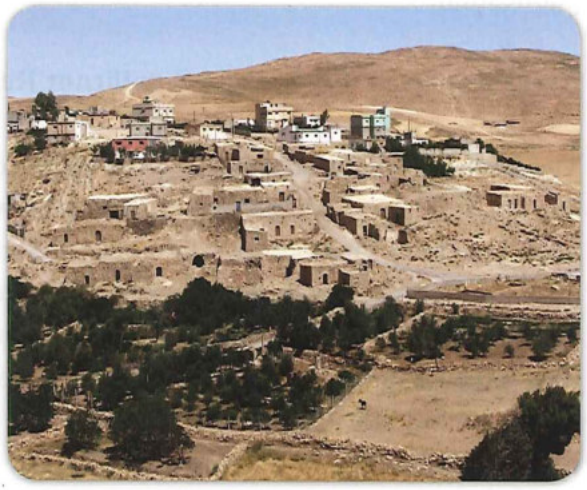

Fig.1: The old village of Basta in June 2007, from south (photo: B.J.A.P.).

Fig.2: Bayt Abu Khadra Al-Naimat, situation in 1987 (photo: B.J.A.P.).

basements. Often they are crawl or pit-like spaces established by substructure-type walls that helped to level the sloping bedrock and supported the first floor.

3) Find-rich intra-mural middens were found in and below "central rooms" of houses, witnessing here a superb sequence of interacting primary, secondary and tertiary deposits/contexts. They helped also to trace activities in the upper house storeys and contain ceiling and roof use materials. One house biography could be reconstructed.

Fig.3: Ba'ja, B-North: Twin Buttresses of upper storey "Central Room" 17 with exposed ground floor spaces 17.1 and 17.3.

4) The question of water access in Ba'ja was discussed further. It is quite likely that the siq of Ba'ja was much less incised, allowing the catchment of water by simple installations or natural basins.

5) Initial pedological investigations that the site rests on a well-developed palaeosol.

Tourism Aspects and Recommendations

Ba'ja is part of the Neolithic Heritage Trail planned from Wadi `Araba to Basta. A rapid socio-economic change makes the local tribal heritage and life modes vanishing. Their documentation is urgent and became part of the community-embedded Ba'ja Neolithic Project. Heritage protection measures and assistance for sustainable developments in the transformation of the al-Amareen tribal environment is an imperative need.

Ba'ja

Project Name: Ba'ja Neolithic Project Season 2007
Duration: March 25-April 19, 2007
Sponsor: ex oriente at Free University of Berlin
Director: Dr. Hans Georg K. Gebel
Representative: Talal Hamd al-Amareen

The Late Pre-Pottery Neolithic B (7500-7500 BC) site of Ba'ja is located in the rugged sandstone formations north of Wadi Musa/ Bayda. The well-preserved pueblo-like architecture rests on an intramontane basin, only accessible by climbing through a deep gorge. The site belongs to a period of mega-villages existing in Jordan in the last half of the 8th mill. BC, which flourished on the basis of progressive population dynamics, specialized surplus production sectors, and unknown chiefdom organizations. Objectives of the season were to explore a house biography and fluvial high energy events occurring during the village's life.

Fig. 1: Bird-eye view of Ba'ja in Spring 2007, from west.

Areas Explored this Season, Significant Results and Conclusions

1) Increasing evidence of extreme high energy events that destroyed the settlement's architecture was found: In addition to the (fluvial?) destruction of eastern Area C by a slope subsidence, there is evidence of a) massive wall destruction -and subsequent deconstruction of walls- in basal Area B-South (B64) and in Area C (C20), followed by b) thick flows of rubble/ gravel (up to 1.5 m in height) that rest against tall standing walls or were found under a later architectural phase in C-10/10. Most likely the wall rubble layers result from at least one earthquake in the earlier settlement, and the fluvial deposits reached the settlement by hazardous floods.

2) It became obvious that lower storeys near the bedrock must not be true ground floors or

Fig. 2: Ba'ja, B-North: View of newly excavated B21 (foreground).

Arabic inscriptions have been also recorded in the area indicating continuity through the nomadic pastoral use of the territory.

Dozens of cairns along the escarpment have been visited and one of them has been chosen for excavation. The materials uncovered inside the cairn indicate its funerary function as we found primary inhumation of an individual in foetal position. The date of this structure will be determined after the C13 analysis of the collected bones (See Fig.3).

Fig.2: Stone circles in site number 31.

Fig.3: Cairn excavated at the right with the associated rectangular structure.

Ath- Thulaythwat

Project Name: Ath-Thulaythwat Archaeological Survey
Duration: January 21 - February 11, 2007
Sponsor: French Institute of the Near East (IFPO)
Directors: Wael Abu-Azizeh and Zeyad AI-Salameen
Representative: Mohammad AI-Marahleh

This project aimed to record and study the archaeological remains of the Ath-Thulaythwat area, south of the phosphate mine of al-Shidiyya, half way between Ma'an and the al-Mudawwara close to Saudi Border. This region represents the eastern desertic extension of the Ras an Naqab escarpment which was surveyed earlier by Henry. The surveyed area yielded a considerable amount of archaeological remains which could be attributed to pastoral nomadic societies that occupied the area through time.

The team fulfilled the objective of surveying more than one hundred sites over an area covering a square of 20 x 20km. Work concentrated along the major Wadis, notably Wadi Abu Meel and its numerous tributaries on the plateau, and around al-Thulaythwat and Mukayhil down in the alluvial plain (see Fig.1). Sites discovered are mostly represented by stone-circles of different sizes and layout and reveal different levels of sedentarization over the continuum from nomadic to fully sedentary populations. The great number of sites discovered and the concentration of settlements in the major wadis emphasizes the important role played by this region in the circulation of pastoral nomadic populations of the area through time (See Fig.2).

The study of the great quantities of material collected from the stone circles is under process but already shows a clear predominance of IVth and IIIrd millennium artefacts, represented by lithics such as tabular scrapers, arrow heads, and blades. A number of Thamudic and North-

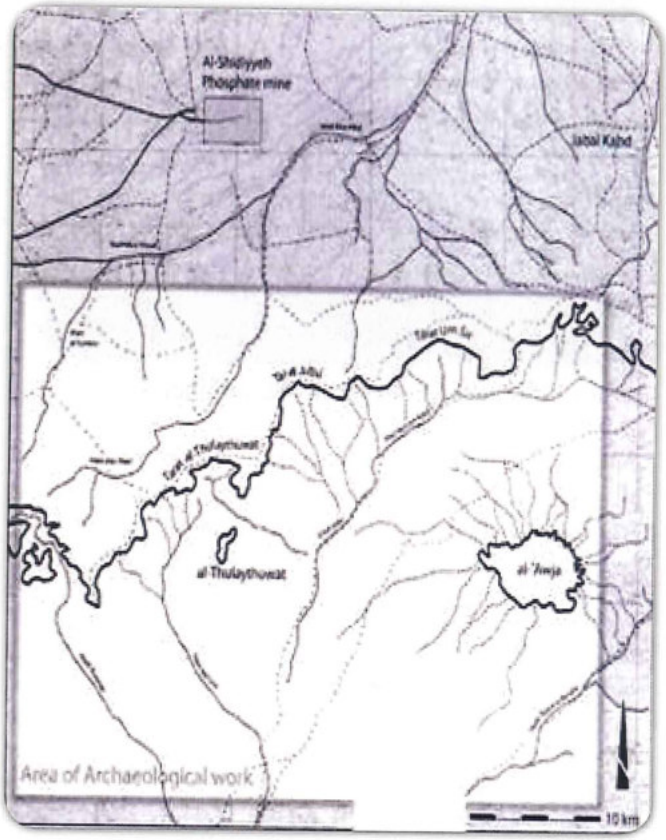

Fig.1: Showing the area of ath-Thulaythwat

walls were also painted. Cement floors were laid on a bedding layer of rough cobbles. Architecture dating from this phase had to be removed to get to earlier remains.

Discussion

Preliminary indications show that both Building A and Building C belong to the same phase. They appear to have been part of a larger compact building. During Phase II (Early Islamic) the construction technique seems to be persistent. Main walls are built of well-cut medium to large boulders. Partition walls are built of medium-sized rough boulders but covered with white plaster, incised with chevron-like patterns. The main courtyard in the middle has a flagstone pavement, while rooms have floors of beaten earth. Part of Building C has a mosaic-paved floor. During this time Shuqayra al-Gharbiyya appears to have had a building with palatial features. Preliminary analysis of the uncovered architectural elements shows strong affinity to palaces known in the area between the Desert and the Sown. Further field research is, however, required in order to add more insight into these remains. The prestige Shuqayra al-Gharbiyya had during the Early Islamic period subsequently declined. The rough walls and wall stubs discovered and dated to later periods show a rural settlement at the site.

Fig.3: A wall, with door uncovered in Square D H9.

Phase II, (Early Islamic Period)

Remains uncovered at the lowest levels of almost all the squares are dated to the 8\9th centuries. They consist of a flagstone pavement with three column bases. The flagstone extends to the north and covers a large part in the centre of the site, probably representing an open courtyard. The stones forming this pavement are thin (10 cm average thickness), square to rectangular (35-45 cm average dimension), carefully aligned plates. Some breakage has occurred.

Our 2007 excavations have shown that the flagstone pavement has two elevations. The southern part, partially discovered in squares C C2 and C C3, is nearly 30 cm higher than the northern one. A system of three columns, as indicated by the bases, has been exposed. The relationship between the three columns is not yet clear. Associated with the flagstone, in Squares C C1 and C C2, were two terraces, made up of well-cut big limestone boulders. These installations are at the same level, and, judging from the construction techniques, are contemporaneous and may have been part of a larger compound.

Fig.2: Stone terrace and flagstone pavement uncovered in Square CC 2.

Excavations in squares D A1, D A2 and D A3 indicate the presence of two chambers. The dimensions of these chambers could not be established. They are built of double-faced walls with evidence for white incised plaster covering the internal faces. Floors were made of beaten mud. Two rooms were partially uncovered in Squares D G9 and D H9. Both rooms have thick double-faced walls and floors consisting of beaten earth. Both also have arched doors open to the east. The lower half of the room was built of hewn and nicely arranged medium-sized boulders. The upper part consists of rough cobbles, and large parts were covered with incised plaster.

Phase III, (Mid-to-Late Islamic period)

Across the site Ayyubid to Ottoman presence is represented by jagged walls, built of stones of various sizes, mostly taken from earlier structures. Three rooms were discovered on top of Phase II remains. Sometime walls dating from Phase III followed those dating from the earlier phase. Occasionally walls were built during phase III to modify an existing installation. This latter phenomenon is particularly seen in Squares D A1, D A2 and DA3. A group of bins was uncovered in Square D B3. The average height of these installations is 40 cm. Semi-hewn stones making up these bins are dry-laid and they were built directly on the flagstone pavement dating to Phase II. Unfortunately, these installations were empty at recovery and their functions remains enigmatic.

Phase IV, (Twentieth Century)

People have been living in modern Shuqayra al-Gharbiyya until the 1970s. The highest levels in the site always have structural remains belonging to this phase. Houses were built of medium to large size boulders, apparently taken from elsewhere on the site, with walls covered with cement plaster. Some

Shuqayra al-Gharbiyya

Project Name: Mu'tah University Excavations at Shuqayra al-Gharbiyya;
Duration: July 2-August 8th 2007
Sponsor: Department of Antiquities and Mu'tah University
Director : Dr. Younis M. Shdaifat
Representative: Ashraf Rawashdih.

Site Identification

Shuqayra al-Gharbiyya (Shuqayra West) is located on 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 drive from Karak. The spot where excavations have been conducted perches on a protrusion in the southern part of the modern village of Shuqayra al-Gharbiyya. As part of the Karak plateau, the terrain here is flat until it suddenly starts to descend sharply in Wadi al-Hasa. The site collapse forms an artificial rise above the surrounding flat fields that are characterized by the Terra Rosa soil. The site used to be known as Khirbat al-Qusayba. Reasons behind change in the toponym are unknown.

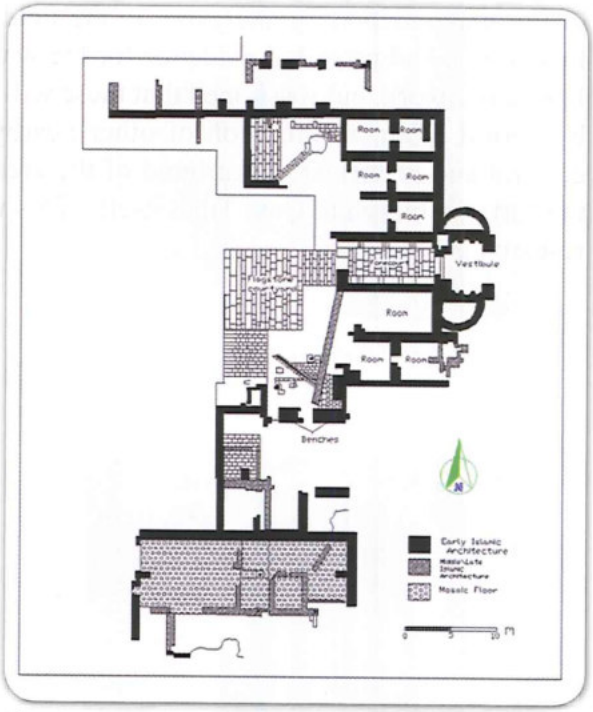

Fig.1: Plan showing the excavated features at Shuqayra al-Gharbiyya

2007 excavation

The sixth season of excavations at Shuqayra al-Gharbiyya was in field between June 24th and August 7th. This season aimed to establish the stratigraphic-spatial relationships between buildings A, in the centre of the site, and Building C, the mosaic-paved compound partially exposed in Area C. Investigating the nature of architecture in the western part of the site, technically situated within D, represented another goal.

In order to achieve these goals ten squares (each 5 x 5 m.) were opened in the area between Building A and Building C providing a greater horizontal exposure of remains. The architectural remains uncovered in these squares can be assigned to Phase II (Early Islamic), Phase III (Mid-to-late Islamic) and Phase IV (Twentieth Century). In total, an area of 250 m2 was cleaned.

pool and garden. At the center of the wall, about 3 meters above the floor level, is a niche inset with a simple limestone block and topped by a badly eroded carved arch stone. The location of this *nefesh*, at the southern terminus of the site's central axis and visible through the island-pavilion's southern doorway, indicates its symbolic importance in the overall design of the garden and pool complex.
In Trench 20, the remains of a small pool or reservoir built of mortared brick and with steps in the southwest corner were found built into one of the casemate spaces. The material and construction is similar to some of the brick structures in the bath complex to the west of the Great Temple suggesting a Late Roman-Byzantine date and thus a secondary use of the space. The center of the pool is badly damaged by a large pit filled with large stones in a grayish-brown ashy matrix. Due to time constraints the trench was closed with plans for further exploration in the next season.

Conclusions: A concentrated effort to excavate fill and overburden in the southern and western edges of the pool area resulted in significant progress and has helped to define the major architectural elements that bound the pool complex. The excavation of the pool complex continues to face logistical issues related to great depths of deposit and the need to transport all excavated soils from the site with a single access road from the northeast, across the garden terrace. The archaeological excavation of the Petra Garden and Pool Complex will continue for several seasons, with plans to fully expose the pool complex and the intention to restore this impressive monument and to further explore the garden terrace with horizontal exposure of the Nabataean garden surface to locate additional tree pits and other subtle garden features.

Recommendations: At the end of the season, arrangements were made to sandbag the brick feature in Trench 20 to protect it from damage from foot traffic. However, the most serious threat to the site is damage caused by water rushing down from az-Zantur, carrying rocks and other debris with it. Arrangements were made to apply mortar to the upper courses of the South Wall to prevent further erosion. Sand bags are laid around the edges of trenches whose earthen baulks would be undermined by the water. It is highly recommended that the Petra Archaeological Park invest in the construction of a retaining/diversion wall along the northern edge of the road that passes above the site, along the top of the southern slope, to help to protect all of the monuments below ("Upper Market", "Middle Market", Garden-Pool Complex, Great Temple) from continued damage and further build up of sediment.

Tourism Potential: The site's location at the heart of the ancient city, next to the Great Temple and overlooking the Colonnaded Street gives it great potential. Its excavation provides a new and unique element within the Petra Archaeological Park and the study of the garden, its cultivation and water systems, add a new dimension to the understanding of the ancient city and its inhabitants.

pool perimeter (previous excavations had worked it down from its original 10 m depth). A deep trench excavated in the south west corner of the pool area (Trench 12, 2004) showed that the uppermost 2.5 meters of the overburden was primarily soft sand with some large stones from architectural collapse and showing no stratigraphic changes. Below this is a layer of dense stone collapse debris above a layer of grayish-brown sediment overlying the bedrock of the pool perimeter. A 2-meter-wide trench (19) was excavated along the south face of the island-pavilion providing an additional section with confirmation of a similar makeup further to the east. Working from east to west, the sandy fill layer was removed by setting a team of workers to excavate with picks and hoes followed by the immediate removal of the soil with machinery. Reusable large stone blocks and other architectural elements uncovered in the process were transported to a designated stone yard along the eastern edge of the garden terrace. In future seasons, trenches will be opened along the south to excavate the remaining 1 meter of collapse debris and sediment to expose the pool's perimeter walk.

A second area to receive attention was the buildup of earth and debris along the west side of the pool area, on the Great Temple's East Perimeter Wall, with the permission of Martha Joukowsky of the neighboring Brown University excavation. Trenches 20 and 21 were opened to begin to remove the overburden and the fill within this monumental casemate wall and to trace the upper courses of its east wall.

Significant results: A 33-meter-long stretch of the top nine course of the South Wall was exposed with the overburden removal along the Pool South. The South Wall is beautifully preserved up to 4 meters in height and creates an imposing backdrop for the

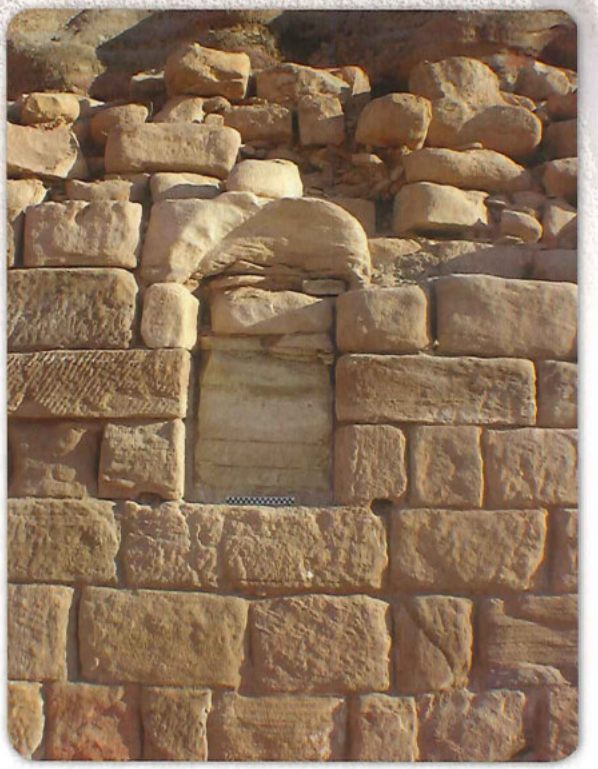

Fig.3: Nefesh at the center of the South Wall

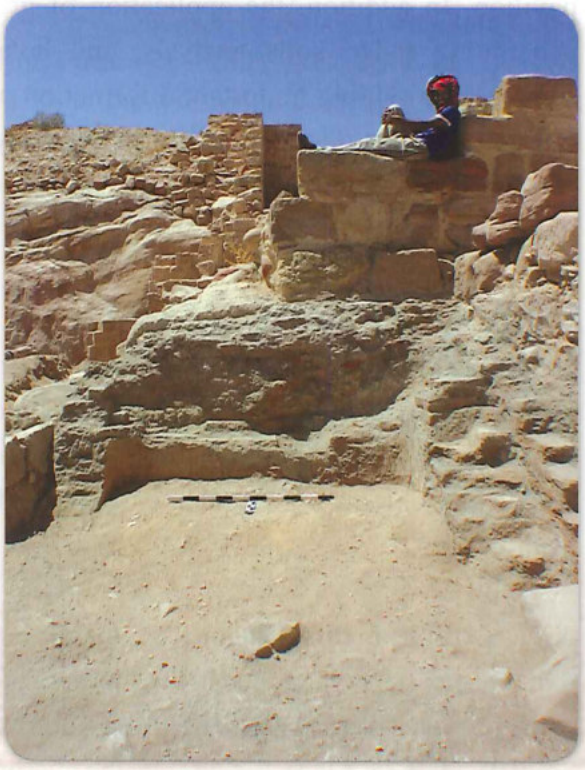

Fig.4: Trench 20, brick pool built into a casemate space in the Great Temple East Perimeter Wall.

the survey area, apparently caused by fill on top of a horizontal stratum below the modern top of the landform. Trench E.1 contained only naturally-deposited sediments, including fluvial deposits concentrated on the northern end of the trench that may have resulted in the high-amplitude response noted above. Trenches E.2 and E.3 also contained alluvial and aeolian deposits in addition to fluvial cobbles and pebbles that may have mimicked an architectural feature in the GPR survey.

Fig.2: Grave in Trench F.1

Areas F and G provided the primary evidence of human activity of all the areas explored in 2007. In Area F, Trench F.4 was placed at the southern edge to explore a discrete reflection that did not recover any archaeological features. Trench F.1 was situated to investigate a surface feature resembling the corner of a cist tomb. This feature in fact proved to be a cist grave containing a single, very poorly-preserved individual (Fig. 2). The bones in this grave had been mostly replaced by small rootlets, with the exception of the dentition and a few parts of the lower limbs, prohibiting any assessment of sex or age beyond identifying this individual as an adult. Despite the poor preservation, a few observations could be made. This person was interred on his/her back, with legs and arms extended, and the skull slightly facing the north. Just to the right and above the head, a small glass bowl was discovered *in situ*, although taphonomic processes had broken it into numerous small fragments. The entire body apparently was covered with leather, upon which some textile impressions could be seen. Eight iron spear points were recovered to the right of the pelvic region and upper leg, which apparently had been hafted on to wooden spears that were not preserved in the burial environment. Further investigation of the spears and glass will provide a date for the burial, although the body orientation suggests a pre-Islamic date.

Trenches F.2 F.3, F.5, and F.7 were laid out to explore another surface feature resembling a tomb. This structure unfortunately had been significantly disturbed through human activity during the past two months. Excavation of these trenches however revealed a large partial cruciform-shaped tomb structure that had presumably been built into the alluvial fan, the surface of which has eroded significantly since the tomb was in use (Fig. 3). The exposure of the tomb eventually resulted in significant erosion of the structure. The tomb consists of a square central room with loculi-like structures off to the north, west, and south, all constructed from sandstone ashlar blocks and paving stones. Underneath the central room was a chamber, also primarily constructed from sandstone ashlars, from which most of the human skeletal material was recovered. The bone from this tomb was much better preserved than the tomb in Trench F.1. The minimum number of individuals (MNI) recovered from this tomb is three (one subadult and two adults), although the original number might have been higher before tomb erosion and robbing. An additional single, primary burial was recovered at the western end of Trenches F.3 and F.5. Trench F.6 was placed to the west to fully recover this burial. This individual had been interred on his/her left side in a flexed position within a simple pit grave

Wadi Ramm

Project Name: Wadi Ramm Cemetery Project
Duration: June 10 – 30, 2007
Sponsor: Joukowsky Family Foundation
Director: Megan A. Perry
Representative: Manal Basyouni

The 2007 season of the Wadi Ramm Cemetery Project served as a follow-up to the 2005 Wadi Ramm cemetery survey. This project had two primary objectives: 1) to find evidence for a cemetery contemporary with the Nabataean/Roman occupation; and 2) to excavate test trenches to clarify the results of the 2005 ground penetrating radar (GPR) survey.

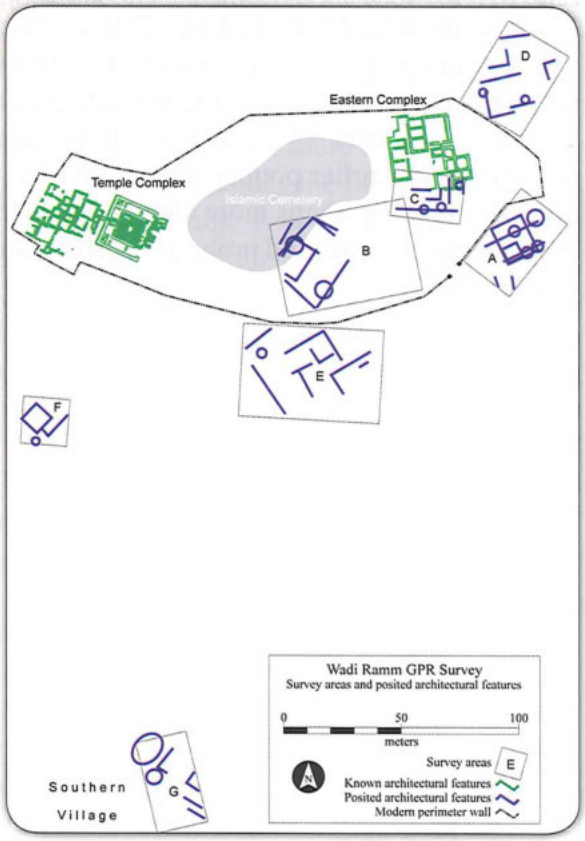

Fig.1: Map of the survey areas and posited architectural and mortuary features

Previous excavations at Wadi Ramm (ancient *Iram*), a small religious and population center situated in the Hisma region of southern Jordan, have not extended beyond the temple and bath complexes in the site center, nor have they focused on mortuary remains associated with these features. In 2005, GPR was used to identify possible graves and other subsurface features surrounding the site. Seven grids (Blocks A-F) totaling 8300 m^2 were explored within the environs of the Nabataean temple and bath/villa complexes and "southern village." All seven blocks had linear patterning indicative of ancient architecture. Six out of seven blocks also contained more distinct areas of interest, possibly indicating graves (Fig. 1). Furthermore, two tomb-like features were noted on the surface in Area F. In order to explore these surface features and subsurface anomalies, seventeen 2m x 2m, one 2m x 6m, and four 3m x 3m soundings were excavated in Areas A, D, E, F, and G.

Three trenches were placed in Area A, ca. 15 m east of the villa/bath complex, to explore two areas of linear patterning and two discrete reflectors possibly indicating tombs. Trenches A.1, A.2, and A.3 failed to reveal any significant archaeological features. Two trenches in Area D, ca. 20 m north of the villa/bath complex, were established to clarify one subsurface linear anomaly and one wall feature noted on the surface. Trench D.1, located at the northern end of the area, revealed only a natural drainage channel with numerous pebbles and cobbles that likely mimicked a wall in the GPR time slices. Trench D.2 uncovered a portion of a large, presumably ancient wall running ca. 60 m to the east of the ancient structures. Only one course of this ca. 1 m thick wall has been preserved. Three trenches were placed in Area E to the south of the eastern complex and temple to investigate two linear subsurface patterns and an area of high-amplitude response extending across the northern portion of

Khirbat al-Malayqta

Project Name:The Lowlands to Highlands of Edom Project
Duratiopn: April 4th to 28th of the year 2007
Sponsor: National Science Foundation Doctoral Enrichment Grant
Directors: Thomas E. Levy and Neil G. Smith
Representative: Haroun al-Amarat

Excavations at Khirbat al-Malayqta (KAM) by the Lowlands to Highlands of Edom Project (L2HE) were conducted from April 4th to 28th 2007. Since the primary objective of the excavations was to conduct controlled stratified soundings of multiple sites for radiocarbon dating and ceramic analysis, the excavations at KAM consisted of three 5x5m probes at two different areas of the site (Area A and B).

Fig.1: The excavation in Area A on the lower western area of Kh.al-Malayqta

Khirbat al-Malayqta is located within Shawbak, Jordan along its Western Steppe at the head of multiple wadi systems leading down to the Wadi Araba, specifically Faynan. The site was selected because of its dense presence of Iron Age ceramics on the surface of the site. It would serve as an ideal test example of Plateau Iron Age for comparison with the Lowland sites such as Khirbat an-Nahas and Rujm Hamrat Ifdan.

Area A

Area A is located on the lower western area of the site overlooking a steep cliff. Two 5x5 meter squares were established using a Total Station. The grid system was set to 117 degrees from North. This alignment was selected to follow the natural contours of the lower area of the site and to directly target two rooms identified on the surface from preserved wall lines. After the removal of top soil from these two squares the two rooms were more clearly delineated. The western square was assigned the number B4 and the adjacent eastern square was C4. Square B4 containing structure 1 was fairly shallow and bed rock was reached after ca. 80cm of excavation. This room as well as structure 2 in C4 was a single occupation period primarily sealed by fill and wall collapse due to later depositional processes. Approximately 10cm prior to bedrock in Structure 1 a compacted surface relating to the original occupation level of the site was discovered

Fig.2: The excavation in Area B on the top of the hill east of area A/ Kh.al-Malayqta

only applied to selected portions of the route where sand would hinder the passage of wheeled vehicles. Overall there are few material remains that support Gharandal as the location of a defensive site. It is my belief that the structure called a 'castellum' is a caravanserai that offered a spot for individuals to rest as they travelled through the Wadi `Araba. The bath complex associated with this structure may support this assertion.


Fig.4: Possible tomb using ashlar masonry

While material remains of ancient activity at the oasis of Gharandal is sparse due to bulldozing, the oasis continues to act as a focal point for human activity providing shelter and resources for humans and their animals.

Recommendations

The bath (P033) has been illegally excavated since the Southeast `Araba Archaeological Survey in 1994. It is located to the north of the modern road in an area frequently bulldozed. The excellent preservation of water pipes within the plaster walls of the structure makes it an important discovery (see photographs). The excavation of this structure may shed light on Roman period occupation at Gharandal while offering some insight into the construction of smaller bath complexes associated with caravanserai (or fortified sites) within the Wadi `Araba.

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Project outcomes / results

1. Reconnaisance survey

The road surface documented by the Southeast `Araba Archaeological Survey was successfully located and segments of the route were recorded in detail. Discussions with the Department of Works and the local Sadiye'en Bedouin (especially Mohamad Swalem) clarified that this road is not ancient. It was constructed as part of a local military project under the leadership of Rfafon Al-Twalha in 1961. This project involved paving sections of road between Rahma northward past Gharandal to facilitate the movement of military vehicles up the Wadi `Araba. Only sections of the road that passed through sand dune areas were paved. Stone was gathered from the local area and therefore the type of stone used in the road reflects the local stone. In some areas 'left over' stone was dumped beside the road.

Fig.2: Possible tomb using ashlar masonry

2. The oasis of Gharandal

Locating previously documented Nabataean and Roman period defensive and /or settlement evidence at Gharandal was difficult due to the disturbed nature of the area. Destruction by bulldozers and military building obscures past material remains in the region surrounding the oasis. In several instances ashlar blocks from past structures have been incorporated into concrete cisterns, military 'fox holes' etc.

Those archaeological remains located at Gharandal that are significant to this study and have not been previously documented are listed below. These sites were documented, their material culture photographed and those of special interest were involved in further multisensory recording procedures (digital recording and panoramic photographs) An important part to this study was the collection of ethnographic information from the Bedouin who continue to use the oasis at Gharandal.

Fig.3: Concrete birka with reused ashlar masonry/, Modern

Conclusions

As of yet there still is no evidence for an ancient paved road in this section of the Wadi `Araba. The 1961 military road located by the Southeast Araba Archaeological Survey does provide an analogous case for how a communication route may have been constructed through the Wadi `Araba with paving

Gharandal

Project Name: Reconnaissance Survey of Communication Routes and Landscape Analysis in the Gharandal locality, Ma'an District (JADIS 1694.001)
Duration: June 16-30, 2007
Sponsors: Council for British Research in the Levant; University of Glasgow, Scotland
Director: Dr. Erin Gibson
Representative: Ahmad Lash

Geographic location

This project took place within the southern reaches of the Wadi `Araba. While reconnaissance survey was carried out between Wadi Nukhayla and the oasis of Gharandal to the north, the main focus of investigation was in the immediate vicinity of Gharandal, Ma'an District.

Fig. 1: Bath complex/ Roman

Historical background

The earliest occupation in the region of Gharandal was located by the Southeast `Araba Archaeological Survey (Smith and Neimi 1997) and dates to the Lower / Middle Palaeolithic period. The majority of material evidence for occupation in the region dates to the Nabataean and Roman periods. Previous researchers documented the presence of a 'castellum' or caravanserai dating to the Nabataean / Early Roman /Roman period on the floodplain to the west of the spring of Gharandal (Gluek 1935; King et al. 1989; Musil 1907; Smith et al. 1997). This structure has been interpreted as being part of the defensive system that included fortification of frontier zone along the Wadi `Araba (Fiema 1995). Smith and Niemi (1994, 1997) believe that the fortifications such as the 'castellum' at Gharandal acted to guard the trade routes that passed through the Wadi `Araba. The road surface that they documented in 1994 provided further material evidence for a north / south route through the Wadi `Araba.

Project objectives

This field research was part of my larger project 'Communicating Power: Social Interaction in the Southern Levant,' the subject of my six month Senior Visiting Research Fellowship at the Council for British Research in the Levant (CBRL). This field project had two main aims. The first was to investigate the power relationships embodied and expressed within the physical form and location of the paved road located through the Southeast `Araba Archaeological Survey (site 101) that extends from the Wadi Nukhayla northwards to Wadi Gharandal. The second aim was to investigate the relationship between roads and paths, the spring at Gharandal and documented settlement evidence at the site.

traces of the *Khatt Shabib*. These encounters took place especially in the investigation of squares in the northeastern segment of the survey territory. Thus, this wall line is well documented throughout ARNAS region.

The sites of the 2007 season include seasonal camps in the form of enclosures (generally circular), inscriptions and rock art, and watchtowers, some of which are now the location of burials. As in the previous two seasons, materials from some of the archaeological periods from the Lower Paleolithic through the Late Islamic were collected from both the squares and the sites. The most prevalent cultural-temporal units represented from the random squares are the Lower Paleolithic, Middle Paleolithic, Chalcolithic, Roman (Nabataean), Byzantine, Classical (Roman-Byzantine), and Late Islamic. The best represented cultural-temporal units from Sites 325-389 are the Lower Paleolithic, Middle Paleolithic, Chalcolithic (?), Iron II, Roman (Nabataean), Byzantine, Classical (Roman-Byzantine), and Late Islamic. Thus, there is, with the exception of the Chalcolithic and Iron II materials, almost complete consistency between the cultural-temporal units represented in both the random squares and the sites.

Attention and efforts are now directed to the writing of a final report on the three seasons of the project.

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)". During the 2005 season, team members surveyed 209 sites, including eight Pleistocene lakes. Cultural-temporal units 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 and from them.

Fig. 3: Site 385: watchtower.

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 researcher into all areas of the territory. 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 involved the transecting and recording of the archaeological remains in 82 of the random-sample units: 27 in Zone 1; 25 in Zone 2, and 30 in Zone 3. While carrying out this work team members also recorded an additional 115 sites (210-324).

During the 2007 season, ARNAS team members completed the investigation of the remaining 58 random squares in Zone 3 not transected in the previous season. All of these squares are located in the eastern extremity of the survey territory and generally fall between the 1400 and 1200 m line. In the north, they happened to lie west of the Desert Highway while in the south they are east of it.

In the course of the 2007 season, team members collected cultural-temporal materials from each of the 58 squares and an additional 65 sites (325-389) were recorded. The latter were found as the result of our travel to-from the random squares as well as within and adjacent to them.
While transecting random squares in the 2007 season, ARNAS team members again encountered

Faynan / Busayra

Project Name: The Lowlands to Highlands of Edom Project
Duration: July 3 – August 5 / 2007
Sponsor: National Science Foundation Doctoral Enrichment Grant
Director: Thomas E. Levy
Representative: Akram Otoum

Archaeologists working in southern Jordan have discovered an ancient trade route that led from the copper ore rich district of Faynan to the Biblical capital of Edom dating from approximately 1000 to 500 BC. The trade route was discovered as part of a joint University of California, San Diego (UCSD) - Department of Antiquities of Jordan (DOAJ) expedition aimed at studying the role of mining and metal production on the evolution of societies from the Neolithic period (ca. 7500 BC) to Islamic times. This particular trade route led from the Wadi al-Guyaba, one of the few areas in the ancient mining district of Faynan with a perennial fresh water source up from the lowlands of Biblical Edom, over the rough limestone and sandstone desert terrain, up to the limited dry-farming region of the area around Busayra which many scholars believe was the capital of the Iron Age (1200 - 500 BC) state of Edom known from the Bible and other ancient Near Eastern texts. Metal and other trade goods no doubt were carried overland on this trade route up from the Faynan lowlands to the highlands of Edom.

Fig .1: Iron Age (ca. 1200 - 500 BC) metal production slag covers the Early Bronze Age (ca. 3000 - 2000 BC) metal production settlement at Khirbat Hamrat Ifdan, Jordan (photo by T.E. Levy, UCSD).

The UCSD- DOAJ expedition carried out two regional surveys - the Iron Age specific Faynan to Busayra survey and a more systematic survey of the upper reaches of the Wadi Jariyeh. There some 39 previously undiscovered ancient copper mines dating from the Early Bronze Age (ca. 3000 - 2000 BC) and Iron Age were discovered. Ancient mining hammers and pottery were found in the tailing of the mines helping to date these ancient industrial features.

To help date ancient metal production sites in the region and measure changes in the intensity of the magnetic field over the past 7,000 years, the U.S.

and pise wall, and a third, later structure also constructed with stone and pise.
These structures were used for a considerable length of time, suggested by the presence of multiple flooring events separated by significant midden deposits, which contain an incredible abundance of well-preserved botanical remains. Four PPNA burials were also uncovered this season. One burial located directly underneath a structure floor contained a small infant and adult, both with skulls intact.
Unfortunately, this burial was looted before it could be fully excavated, and much primary context information was lost. Careful excavation of the few human remains left intact by the looters suggest that the infant was buried first; the adult was probably buried in an upright, sitting position, and it appears that the top of the skull may have been visible or at least formed a small dome in the overlying floor. The third burial, identified underneath anther floor in the latest PPNA structure identified in the area, also contained an adult This burial was completely destroyed by looters and little primary context information could be recovered. The rarity of intact, primary PPNA burials in Jordan makes the destruction of these PPNA burial at al-Hamma all the more disheartening and unfortunate.

Excavation in the Late PPNB, PPNC, and pottery Neolithic areas will now be paused until all excavation results from the 2004, 2005, 2006, and 2007 seasons are analyzed, hypotheses tested, synthesized and published.

Future publications focusing on the architecture and stratigraphy will be presented in a self-contained monograph as wen as *Paleorient* and *Journal Of field Archaeology.* Paleoenvironmental results (e.g. botanical and faunal remains, stable isotopes) will be submitted to the *Journal of Archaeological Science*, *Anthropozoologica,* and *Geochimica et cosmochimica.* Existing publications for site can be found in *Eurasian prehistory* (2006), and *Neolithics* (2005, 2007). Proposed excavations for the 2008 season will focus solely on the PPNA deposits. The rising waters of the Tannur Dam are directly threatening the PPNA deposits at al-Hamma; waters are now only approximately 100m away from this area of the site. The recovery of these PPNA deposits, especially those with such well-preserved botanical remains, is critical to our understanding of the transition from hunting and gathering to agricultural in this region of the Levant.

Khirbat adh Dharih

Project Name: Excavation and Restoration at adh Dharih, 13th season
Duration: 14/7/- 24/8/2007
Sponsors: Yarmouk University, DoA, CNRS (France), Ministry of Foreign Affairs (France), IFPO (France)
Directors: Pr. Zeidoun al-Muheisen and Pr. Francois Villeneuve
Representatives: Jihad Darwish and Abdallah al-Rawashideh

Khirbat adh Dharih is located on the east bank of the La'aban valley, 20 Km north of Tafila, on the edge of the Kings Highway, the main caravan road in Jordan in Antiquity. The site is mainly Nabataean and Roman, and was resettled in the Late Byzantine, Umayyad and early Abbassid periods, and finally in the late Mamluk or early Ottoman period. Earlier remains exist here and there: EB IV and Iron II.

This season, the excavation and restoration were completed around the early 2nd century AD temple. On the eastern side, several late antique buildings were excavated, including a small wine-press. On the northern (rear) and western sides, the team completely excavated the underground corridors surrounding the foundations of the temple. The northern corridor proved to be an important area for the cult: its beautiful limestone pavement includes two small cultic vats along the main axis of the temple. Both corridors were reused in Late Antiquity as storage places, with many storing jars.

Fig.1:Arabic Inscription

In the main courtyard of the sanctuary in front of the temple, the main cistern of the 2nd century sanctuary, which the team has been looking for over many seasons, was finally discovered in the south-east sector of the courtyard below the huge debris of the late antique domestic buildings of that area. It proved to be a perfectly preserved underground roofed cistern, with arches and roof of well-made limestone slabs, and with walls of stone ashlars. It is 7 meters by 5 wide and at least 5 meters deep, but the earth at the bottom has still to be excavated. Other discoveries in that courtyard include cultic stone devices along the eastern half of the south portico, in particular a monolithic basin, and a very small late Byzantine or early Islamic wine-press.

Fig.2:Restoratoin of the main sacrificial altar

One of our main difficulties was trying to log previously unsurveyed open air sites in the wadi al Mujib. The area west of the dam does not appear to have been surveyed but is rich in sites. We therefore recorded some open air sites as RLP sites even if they were not caves. This area deserves a full survey. While our time in the south was frustrating, it is gratifying to note that our methodology of 2006 was vindicated by our instant results in Irbid/Ajlun (a region where caves can be expected): within a day of moving to the north we had located 2 new caves. In total this season (north and south) we recorded 30 new RL sites (see over) and 170 blanks.

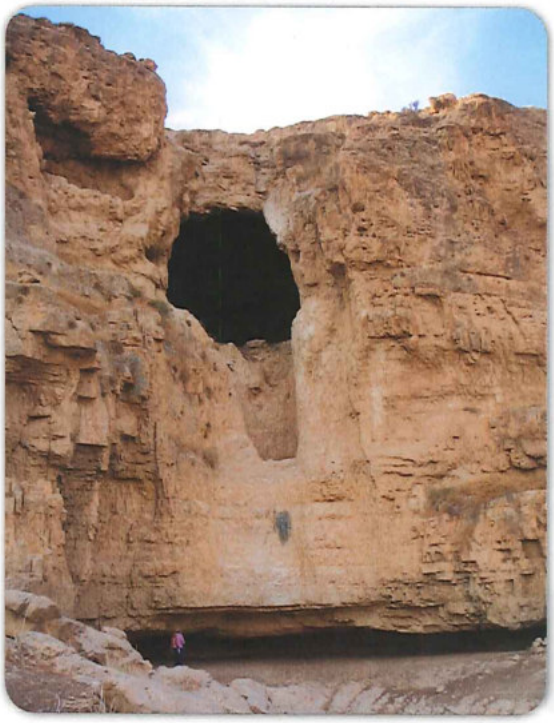

Fig.3:Wadi Hidan :Tur Wadada

Fig.4: Wadi al Mujib/west

Wadi al - Mujib, Hidan and Zarqat Ma'in

Project Name: Ritual landscapes in the Chalcolithic and Early Bronze Age (4500-3000 BC)
Duration: Nov 4 – Dec 13, 2007
Sponsor: Council for British Research in the Levant (CBRL)
Director: Dr Jaimie Lovell,
Representative: Sati` Massadeh and Khalid Tarawna

Summary: 6 week survey season, focusing upon natural cave sites. This is the second season of survey – in 2006 we surveyed the northern highlands. This year the survey is concentrated in the area west of the Kings Highway, and east of the Dead Sea running south from Madaba/Dhiban to the Karak Area. The aim of this project is build contextual data for the known larger Chalcolithic sites and extend our understanding of Chalcolithic mortuary practise.

We focus upon geological zones, specifically the Wadi as Sir Limestone (WSL) belt which appears in patches in many different Wadis. In the period from 4th November – 1st December we focused upon three wadi systems in southern Jordan: Wadi al Mujib, Wadi Hidan and the Ma'in/Zarqa survey. On the 2nd December we moved back to our 2006 survey area in the northern highlands. We moved because despite our best efforts we found no large caves in the south and we knew there were large caves in the north.

Results: Our findings this season confirm that deep caves are not present in the Wadi al Mujib/Hidan/ Zarqat Ma'in area, in direct contrast to the northern highlands, where we have large (by Jordanian standards) caves including Zubya (RL5). On the basis of our 2006 survey and the 10 days we spent this season, there is great potential for further cave discoveries – we discovered a number of collapsed and blocked caves. It appears that locals fear deep caves, and see them as dangerous playgrounds for children and potential hazards for animals and do their best to block them. Other caves have collapsed due to more natural processes.

Fig.1: One of the caves found at Zarqat Ma'in area

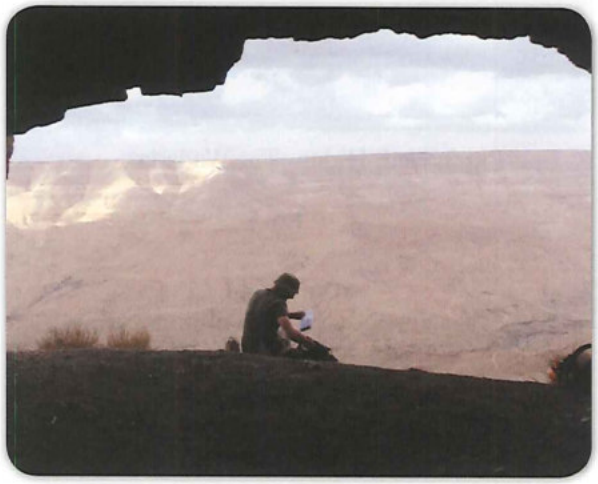

Fig.2: Wadi al - Mujib:Tur al-Buq

thought. The newly registered sites include occupation from the stone age, Early Bronze, Iron Age, Roman-Nabatean, and Islamic periods. The numerous sites and installations of Wadi ash-Shqayfiyyat, many of them well fortified, indicate that this route through the wadi was frequently in use throughout the centuries. At various points the course of this route can be traced. From this main route that led through the wadi many smaller tracks branched off and ascended to the edge of the plateau. The western edge and slopes of Wadi ash-Shqayfiyyat seemed to be more frequently and densely occupied than the eastern part (this is due to the nature of the eastern slopes; the area west of Wadi ash-Shqayfiyyat provides better economic possibilities).

Fig. 3: Ancient track crossing the slopes of the wadi

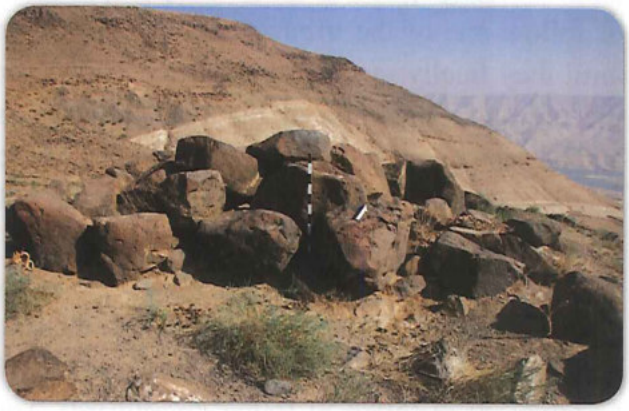

Fig.4: Cairn

Wadi ash-Shqayfiyyat / Wadi al-Mujib Area

Project Name: Wadi ash-Shqayfiyyat Survey
Duration: August 19 to September 13, 2007
Sponsor: Friedensau Adventist University, Friedensau, Germany
Director: Friedbert Ninow
Representative: Arwa Masaadeh

Ancient travelers who wanted to cross the Wadi al-Mujib and its various sub-wadi systems on the way from the northern Dhiban plateau to the central Moabite plateau (or vice versa) had to find their way either on narrow paths winding up and down the deep slopes of the wadi or follow one of the tributary wadis that led upwards until they finally reached the plateau. If one considers the physical landscape of the Wadi al-Mujib system and its tributaries it becomes clear that one of the major routes reaching the Moabite plateau leads through Wadi ash-Shqayfiyyat. Wadi ash-Shqayfiyyat branches off the southern arm of Wadi al-Mujib, Wadi an-Nukhayla, ca. 5 km east of the modern dam. Near the plateau, Wadi ash-Shqayfiyyat bifurcates into Wadi Abu al Kabish (southward) and Wadi al-Balua` (westward). Adding to the importance of this tributary wadi is the fact that this possible ascent is guarded by the major Iron Age site of Khirbat al-Balu‘ on the edge of the Moabite plateau. Thus, the main focus of the survey was the area where Wadi ash-Shqayfiyyat empties into Wadi Nukhayla, further southward through Wadi ash-Shqayfiyyat, and up to the area around Wadi al-Balu‘.

Fig.1: Wadi ash-Shqayfiyyat

Fig.2: Qasr ar-Raha in the Wadi ash-Shqayfiyyat

This year's survey concludes the initial survey season of 2001. In both survey seasons over 150 archaeological sites were registered.

The objectives of this survey are to obtain an overview of the archaeological potential of this wadi; to register various archaeological sites; to get an insight into the occupational horizon; and to investigate the various road and track routes that led through the wadi and off the wadi onto the plateau respectively.
The result of the survey shows that the wadi was more densely and more frequently occupied than previously

Fieldwork was also resumed at the south eastern outskirts of the village of ar-Rabba for a brief survey completing our documentation of the ruins of the presumed temporary Roman military camp. Architect Muhammad Ali Al-Khattib was in charge of the mapping in collaboration with archaeologist Dr.Laura Ceccarelli. The archaeological site, a rectangular compound of *c.* 1 ha, is located on the modern road to al-judayyda/al-lajjun, c.300 m from ar-Rabba. The site was discovered during our 2003 season and verified on the ground from an initial stereoscopic aerial photo reading georeferenced according to the surveyor Fabio Rossi's established coordinates with a global positioning system (GPS). The site plan supplemented by GPS has now been confirmed with ground measurements. More topographical information has also been gathered. The distinctive rectangular shape and interior layout of the archaeological area is especially visible in the eastern sector. Physical remains consist of decayed low dry stone ridges marking wall lines crossing the area at right angles. The north perimeter wall borders upon a paved street from the Roman period, probably the original road directed to the legionary *castrum* of the *IV Martia* (To day's al-lajjun site). The size and general configuration are comparable with a number of military installations in the region known as "temporary camps" (Kennedy and Riley 1990). Information on a military garrisoning of Areopolis is by the *Equites Mauri Illyriciani* as mentioned in the *Notitia Dignitatum (Or.*37). Although the military character of the archaeological area is suggested by its general lay-out, nevertheless the ar-Rabba features conjectural identification will have to be the object of future archaeological soundings.

series of geometrical figures framing a sequence of square panels decorated with highly stylised flowers. The whole composition is oriented to the west (Fig 1). Although the central sector is almost completely destroyed, reconstruction of the missing motifs can be suggested. Composition and figural style certainly belong to iconographic programmes well known from the corpus of mosaic pavements in the Provinces of *Arabia* and *Palaestina,* dated *A.D.* VI-VIIIth centuries. During our 2007 season, we completed the graphic documentation of the mosaic pavement. One of the main goals of next season will be the restoration and consolidation of the mosaic by local experts.

In the urban landscape of ancient *Rabbathmoba/ Areopolis*, the standing remains of a Roman period public building are still a prominent feature (Fig. 2) This was identified by von Domaszewski at the beginning of last century as a monument/temple of the Tetrarchic period (*A.D.*285-305), based on his reading of the two Latin building inscriptions placed under the large niches in the façade wall, still existing at the time of his joint publication with Bruennow of the first volume of "*Die Provincia Arabia*" (1904-1909) (only the north inscription is now preserved). In particular, only the principal (east) façade belongs to the original building , as most of the features now visible are a turn of the nineteenth century incorporation of the ancient remains in a house construction by settlers. Typical of the latter are the three arches of its former roofing device, and the perimeter walls erected on the remaining well-squared courses of the Roman period. The surviving features of the Roman period building and those typical of the traditional vernacular architecture, have been surveyed and drawn by our architects' team (architects Ombretta Dinelli, Roberto Sabelli, Rita Sabelli, Francesca Malesani, Francesco Ciampinelli, Giovanna Battista in coordination with Prof. Arch.Luigi Marino of Florence University). During a general clearing of the interior for a end of our season photography in 2006, a Christian cruciform baptismal font installation was discovered (Fig. 3). During the 2007 season we proceeded with the drawing of the relatively well preserved features. A close parallel is the canopied cruciform font found in the baptistery of the Petra Church (Fiema 2001); comparisons are also possible with the Jabal Harun Monastry and the Siyagha/Mount Nebo Church installations. Located in the centre of the building, the font and its visible masonry appeared coated with hydraulic plaster and decorated with marble slabs. At the perimeter of the west and east walls, much of the original Diocletianic period basalt pavement has also been recovered. In its central part the original pavement had been removed for the installation of a double row stone water conduit connected with the font and an underground water tank identified at the entrance. During the same period the hall had apparently been covered with a new white stone pavement, only partially preserved. The *A.D.*sixth century has been tentatively proposed as the chronology for the major remodelling of the Roman period building and the installation of the cruciform baptismal font, based on comparative regional and Italian installations.

Fig.3. Baptismal font installation

Ar-Rabba

Project Name: "The Rabbathmoba and Qasr ar- Rabba Project"
Duration: November 1/11- 6/11/2007
Sponsor : The Italian Ministry of Foreign Affairs, The Italian Institute for Africa and the Orient, Perugia University.
Director: Dr.Jacqueline Calzini Gysens
Representative: Ashraf Al-Rawashdah

The standing remains of ar- Rabba, ancient *Rabbathmoba/Areopolis/Ma'ab,* have been the subject of four seasons of fieldwork and architectural survey (1999, 2000, 2003, 2004) and two seasons (2005, 2006) of archaeological excavations. The groundplan of the monumental archaeological area covers 8,286 sqm. The urban layout of the last occupational level of the area belongs to the Late-Antique/Umayyad period, although some features of the original Roman monumental framework still prevail. In the early 1960s the Department of Antiquities of Jordan cleared some archaeological sectors of debris, discovering the features now visible in the area: a sector of the colonnaded street, a small church building, a public Roman period building dedicated to emperors Diocletianus and Maximianus (*A.D.*285-305) and other features.

Fig.1. Large fragment of a multicolour mosaic pavement

In the course of the 2005 and 2006 seasons, under the direction of Prof.Gianluca Grassigli, a number of soundings were made in the church sector, investigating its original layout and construction chronology. Sounding 3, opened along the north perimeter wall, provided some insight of its plan, showing that the church was mono-apsidal with a single nave. Its association with the adjacent south room or corridor featuring a row of three column bases and communicating directly with the open court yard or square on the east side is still to be ascertained. That last sector has been selected for extensive excavation. Large fragments of a multicolour mosaic pavement came into light during the sounding, covering half of the room's ground floor and incorporating the row of column bases but not in association with the north and south walls. Its design pattern shows a double

Fig.2. The standing remains of a Roman period public building

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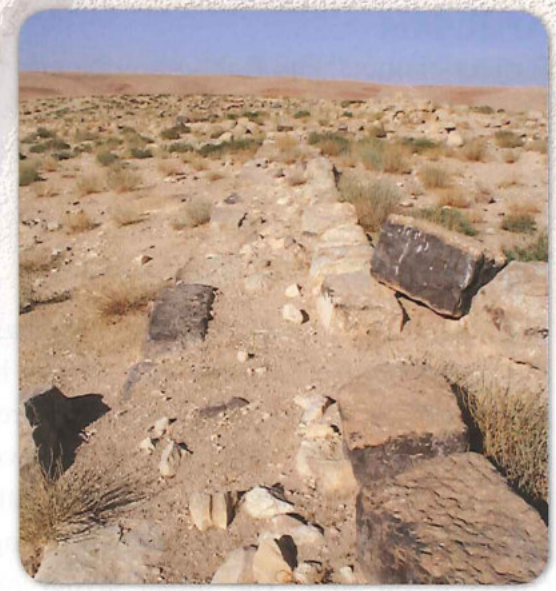

Fig.3: South -eastern fortifiction

Aims and Goals of 2007 campaign:

The vast archaeological area and historical stratification evinced from the collected data, attests the importance of the site within the Province of Palaestina Tertia and in particular within the district of Karak during the upper mentioned historical periods. The site of Nukhul/ Nakhil dominates and overlooks an area of 10 km with several minor settlements and fortifications position that may stress on its key role in agricultural production and industrial potential. The archaeological investigation proposed by State University of Central Sicily "Kore" of Enna – Italy will deal with the rural settlement of Nakhil taking in consideration the means of human occupation of the site during late antiquity within a larger frame of investigating features of rural settlement in the northern limits of Palaestina Tertia and its gradual chronological transformation in the Byzantine, Omayyad, Abbasid and Mamluk periods. The future excavation will help in establishing a more accurate chronological sequence of the sites occupation and abandonment.

Fig.2: Settment Activity in the form and building

The research program of the preliminary survey has focused on detailed recording the sites boundaries, its geomorphology and archaeological features this included the documentation of the status of the site in particular the degree of recent destruction/damage taking in consideration historical aerial photographs (Google Earth and Royal Geographic Center - Amman), further more the articulation of the antique habitat and its morphology were analysed. The information obtained will be employed to create a digital database of the site this will include digital photographs, field notes and cultural material analysis and will be useful in selecting the areas for excavation.

During the survey the team conducted a detailed topographical mapping of the site this included collecting geo/topographical data using Trimble GeoXT equipment and digital images with QTVR technique. We hope that the research work may help in the future not only in the comprehension of settlement patterns in the area in late antiquity but also valuable in the preservation of the site's archaeological features from further damage and looting and in creating tourism potential.

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project with an opportunity to refine and tailor its methodology to the landscape, which can be challenging to survey. A secondary aspect of the project was to determine the condition of Jabal as-Sis given the fact that it was shown to be threatened by road and power line construction in the 1983 *ADAJ* article, and to locate the PPNA deposits within the site. In addition, the project attempted to assess the extent of the Chalcolithic component of the site, which was the focus of the initial identification of Jabal as-Sis by Jacobs (1983), as the vast majority of the finds were from this time period.

In order to pursue the long-term goals of the project, we conducted two weeks of landscape survey in the areas between Wadis 'Isal and adh Dhra' (UTM: 36 R 3447800-3461300 N / 0739100-0750600 E). Within this area we sampled only a small portion, covering 2 ¼ square kilometers of survey area, using ½ km x ½ km survey units. Within this small sample, however, we explored all six major land formation types (plateau, upper slope, lower slope, terrace, fore slope, and ghor) focusing heavily on upper slope areas similar in topography to Jabal as-Sis. This variation in survey choices was designed to obtain a better picture of survey methods, success rates in different terrains, and the variability between locations of similar topographic character. The survey has already identified ten prehistoric sites, two of which contained significant cultural deposits, three abandoned stone features, and ten disused check dams.

Another major focus of the survey was the collection of ecological information from the various areas surveyed and the identification of natural resources known to be used in the PPNA. Each survey unit had multiple 10 square meter collection circles created to identify, collect, and count plant species based on variations in soil characteristics, topographic information (slope and elevation), water resources (in soils and from sources), exposure to sun and wind, domesticated animal modifications, and human modifications. In relation to other natural resources, each survey square was found to contain at least one water source (spring or stream) and one flint source, with nine water sources and ten flint sources currently identified. Their locations (UTM coordinates and elevations) and extents were recorded to give a better picture of the available resources spread out across

Fig.3: The prehistoric site of SU-2007-07 located at UTM: 36 R 0748615-0748647 E / 3455738-3455793 N.

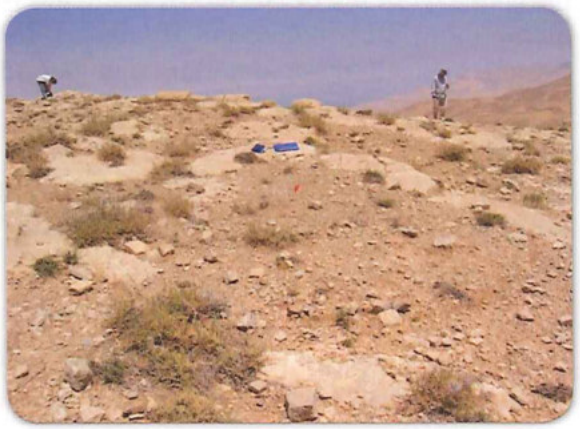

Fig.4: The prehistoric site of SU-2007-09 located at UTM: 36 R 0749011-0749051 E / 3455787-3455815 N.

Wadi 'Isal, Wadi adh Dhra'

Project Name: 'Isal-adh Dhra' Archaeological Project
Duration: 4 July – 4 August 2007
Sponsors: National Geographic Society: Grant Number 8220-07, University of Michigan International Institute, University of Michigan Rackham Graduate School, University of Michigan Department of Anthropology
Directors: Matthew V. Kroot, and Chantel White
Representative: Rami Freahat

Summary: In July and August of 2007 the first season of the 'Isal-adh Dhra' Archaeological Project, a long-term survey and excavation project located between Wadis 'Isal and adh Dhra', as well as the Southern Ghawrs, was conducted. The project is intended to explore the Pre-Pottery Neolithic A (PPNA) occupation in the area through landscape survey and excavation at the PPNA site of Jabal as-Sis on the south ridge of Wadi 'Isal.

Wadi 'Isal has been the focus of two earlier surveys. The first of these was conducted by Dr. Siegfried Mittmann in 1979 (Mittmann 1982). His survey was focused on the identification of sites associated with the Iron Age path ascending from Ghawr 'Isal to the Old Testament town of Luhith (modern Kathrabba). The second of these was conducted by Dr. Linda Jacobs in 1981 along the south ridge of the wadi in order to locate, map, and collect Bronze Age sites (Jacobs 1983). It was this survey that identified the multi-component site of Jabal as-Sis, at the time labeled C8-14. The 1983 article published by Dr. Jacobs on her survey provided the inspiration for the 'Isal-adh Dhra' Archaeological Project. In addition to artifacts dating to the Chalcolithic, the illustrated finds of Jabal as-Sis included two al-Khiam points, indicating a PPNA occupation. The proximity of Jabal ar-Seis to the two PPNA excavations of Wadi adh Dhra' and Dhaharat adh Dhra' 2, provided an unprecedented density of PPNA remains with which to explore inter-site interactions and resource use among PPNA sites.

The goal of the project was to begin mapping the locations of all PPNA remains, including sites, pathways, and hunting modifications in the areas around Wadis 'Isal and Dhra', as well as natural resources, including water, flint, and suitable agricultural land. The first season provided the

Fig. 1: The site of Jabal as-Sis, facing Northwest. The plateau on left is the focus of the Chalcolithic component and the terrace on the right is the PPNA component.

Fig.2: PPNA formal tools found during surface collection. The top row is four el-Khiam and related point types and the bottom row is drills/ borers.

wall was exposed in one of the units. Excavation had to be halted due to time constraints and safety issues, but plans are underway to reopen these areas in future seasons.

Fig.3: Early Roman/ Nabatean Stractures

Previous work at Tall Mādabā revealed the remains of structures dating to the Early Roman/Nabatean period that have been severely damaged by building activity in the late 19th and early 20th centuries. Excavations in three new units during the 2007 season have exposed more of these structures and confirmed the extensive nature of the later disturbance (Fig. 3). The known artifact assemblage for this cultural period at Mādabā has also been expanded to include several restorable vessels, a number of stamped Rhodian amphora handles, and a collection of over 40 clay loom weights.

Although the importance of Mādabā during the Byzantine period is indisputable, until the 2007 season no architectural remains from this phase of occupation had been found in Field B. The heavy rainfall during the winter months exposed the fragile remnants of an in situ mosaic floor in the eastern baulk of the principal excavation area. The polychrome pavement, decorated with a grid and lozenge pattern, is extensively damaged. The fragment that remains, however, seals against a stone-built threshold equipped with a large door-post hole (Fig. 4). This architecture clearly indicates the existence of a monumental structure on this part of the tall, unfortunately later occupation seems to have destroyed most of it. Future excavations to the east of this area will hopefully expose more of the structure.

Fig.4: Byzantine Mosaic and Architecture

An unexpected result of the opening of two units on the eastern edge of the site was the exposure of several more rooms of the Late Ottoman house that occupies the north-eastern corner of the excavation area. A series of small rooms flanked the entrance to the building. The presence of a substantial cement floor suggests that at least one of these rooms was used until modern times.

The location of this site within the urban core of the city of Mādabā, within walking distance of the Mādabā 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.

Tall Mādabā

Project Name: Tall Mādabā Archaeological Project
Duration: June 11 to July 19, 2007 (39 days)
Sponsor: University of Toronto /Department of Near and Middle Eastern Civilizations
Director : Debra Foran and Timothy P. Harrison
Representative: Isa Suriani

The 2007 field season of the Tall Mādabā Archaeological Project concentrated solely on excavations in Field B. The primary objectives of this season were to reopen two units in order to complete the exposure of the Iron Age levels first encountered in 1998, explore more of the Early Roman/Nabatean and Hellenistic structures in a new unit adjacent to the main excavation area, and open two new units on the eastern edge of the site to expose remains closest to the centre of the tall. The past seven seasons of excavation at Tall Mādabā have revealed a complex occupational sequence inside the city's fortification wall spanning the Late Ottoman period through to the Iron Age.

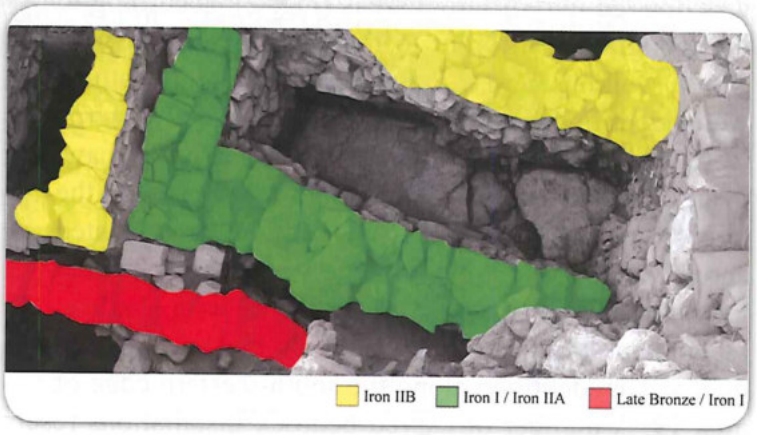

Fig.1: Earliest Iron and LB levels


Fig. 2: Eastern most Excavations unites

Excavation efforts in Field B have succeeded in clarifying the nature of the Iron Age settlement at Mādabā. A large pillared-building dating to the Iron IIB period was uncovered during the 2006 season. This structure was completely cleared and removed at the beginning of the 2007 season. An earlier Iron I/ IIA monumental structure, partially excavated in 2006, lies underneath it. Only the south-western corner of the building could be excavated, but two substantial double-row walls were exposed (Fig.1). A large single-row wall to the south of this structure dates to an earlier period, possibly some time during the Late Bronze or early Iron I periods based on the ceramic assemblage. Excavations beneath the foundation levels of these structures revealed a plaster surface that extends eastward from the city's fortification wall. It appears that, once the massive wall had been founded directly on top of the bedrock, the area was leveled off with soil and paved with plaster. The wall built of single boulders, representing the earliest occupation phase, lies above this surface and may be associated with the construction of the fortification wall's superstructure.

Iron Age levels were also reached in the two easternmost units that were newly opened in 2007 (Fig. 2). The deepest soil layers in this area produced solely Iron II pottery and a portion of a pillared

period, with the construction of a modified four-iwan residence and series of storage facilities in the early fourteenth century and subsequent restructuring of these domestic areas into more fortified spaces within the century. Two towers on the southwestern side of the tell may have been built filled in as part of this effort.

Excavation of the southeastern and northeastern towers provided evidence of extensive rebuilding and refortification of the summit during the Roman, Byzantine, and Mamluk periods. Clearing the wall faces in Field M clarified the construction style of the original fortification: alternating courses of large boulders and chink stones, as seen throughout the enclosure wall on the summit, can also be seen in sections of the Amman Citadel wall, dated to the Ammonite period, and at the Iron Age Burj al-Rufuf at the Department of Antiquities in Amman.

Exploration of the western slope of the tell in Field C identified two monumental buildings: a large Early Byzantine farmhouse with high walls and well-preserved arched doorway (reused in the Mamluk period) and a complex of what appear to be three, and perhaps four, casemate rooms fronted by a fortified wall. Two of these rooms were built in the Early Byzantine period and reused in the Mamluk era, one for storage (as the fragments of restorable vessels indicate) and one as domestic space. This latter room was of special interest for its evidence of warfare: wall collapse and extensive burning associated with a major conflagration was associated with large quantities of corroded metal, including large cross-bow bolts, the first evidence of medieval military accoutrements found to-date at Hisban. The date of this room was fourteenth-century C.E.

Excavation of what is believed to be the foundations of the modern village of Hisban, on and below the southeastern slopes of the tell in Field O, continued this season, with the uncovering of a complex of houses around a cistern. These single-room houses, of meter-thick stone walls and stone-vaulted ceilings, are late Ottoman (late 19th-century C.E.) in date, and were built into and over the ruins of a Byzantine-era building, likely a farmhouse.

Because of the excellent preservation of its citadel and its historical and religious significance, plans are on-going to present the site to the public. Each season the project has engaged in consolidation of standing remains, the most important effort in this regard being the formal restoration work of Ms. Ronza from July 2005 through December 2006, financed by the U.S. Embassy. In addition, Andrews University is working closely with the Directorate of Hisban and the Department of Antiquities to design a visitor's center and museum, which will highlight 40 years of archaeological work by Andrews University at the site and Hisban's long occupational history, spanning more than 5,000 years.

The Tall Hisban excavations are under the Senior Direction of Dr. Øystein S. LaBianca of Andrews University, with the Co-Direction of Dr. Bethany Walker of Grand Valley State University (Michigan) as Chief Archaeologist. Ms. Maria Elena Ronza is the project's Co-Director of Restoration. In addition to 10 core staff from the U.S. and Jordan, the project included 28 students from Andrews University, Grand Valley State University, and Calvin College in Michigan, as well as 6 volunteers from Michigan, Oklahoma, and the Universities of Jordan and Copenhagen.

Tall Hisban

Project Name : MPP-Tall Hisban Excavations
Duration:14/6 - 24/7/2007
Sponsor: Andrews University
Director(s): Dr. Øystein S. LaBianca and Dr. Bethany J. Walker
Representative: Sabah Abu Hedaib

Tall Hisban is a multi-period, fortified hilltop on the Madaba Plains, some 25 kilometers south of Amman (Fig. 1). The architectural remains on the summit include the remnants of a possible Iron Age wall, a Roman monumental building, and a Byzantine basilica. The majority of the standing structures, however, belong to a 14th-century C.E. complex that included a military garrison, bathhouse, and residence of the Governor of the Balqa, when Hisban served as an important military, administrative, and economic center for the Mamluk Sultanate based in Cairo. This summer's excavation, which took place from 18 June through 18 July under the sponsorship of Andrews University in Michigan, was designed to better understand the history of the fortifications and village occupation, particularly during the Islamic eras.

The goals of this season were four-fold: 1. to determine a date for the original construction of the bathhouse and better understand its structural and functional relationship with the rest of the Mamluk complex on the summit (Field Q); 2. to document developments in the fortification system of the summit through from the Iron Age (or earlier) through the Late Islamic period (Field M); 3. to trace the history of occupation of the medieval village below the tell (Field C); and 4. to describe more fully the emergence of the modern village from the late Ottoman era through archaeological, historical, and ethnographical analyses (Field O). In order to address these research concerns, 17 squares based on 5x5-meter units in four different fields were excavated and recorded.

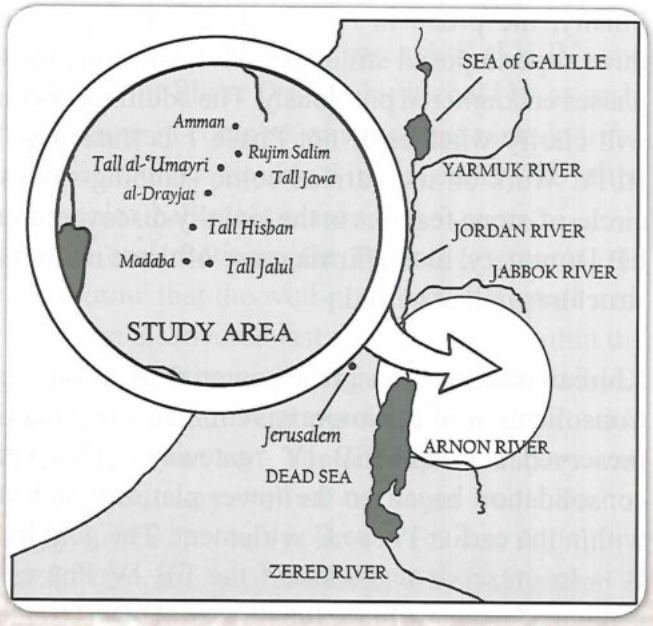

Fig.1: Map of Study area

Excavations in Field Q, at the southern entrance to the summit, documented the transformation of the tell from a place of worship to a militarized citadel. During the Byzantine period the summit was entered through two entrances on the south side, approached by stairs descending to the former Roman plaza below. The summit was dominated by an Early Byzantine basilica, which was built directly on the remains of a Roman structure, perhaps a temple. The summit was transformed into a fortified citadel during the Islamic era. Excavations this season revealed that the bathhouse originally dated to the Mamluk period may have been an Umayyad (8th century C.E.) construction built on top of the basilica, associated with an administrative center and semi-official residence, much in the pattern established by the Umayyads on the Amman Citadel. This summer's fieldwork provided evidence for three phases of rebuilding in the Mamluk

Site JR2. The site extended for c. 125 meters with a well near the center of the site to the east side of the road and a rock cut cistern at the northwest end. A built roadbed was visible only to the northwest, although occasional flat stones (c. 20 – 50 cm) on end forming irregular straight edge lines continued to the southeast end. Nine sherds of pottery were found within the roadbed area of JR2, predominately Iron Age, with Byzantine and Islamic.

Site JR3. The visible road extended for approximately 200 meters. Neither the road's reported continuation, nor its terminus of "Tall al-Khdar" could be discerned across a cultivated field further to the southeast. The built roadbed was in the form of a heaped ridge of stones, with upright stones forming a center line. A rock-cut cistern was found at each of the three coordinate points taken. Pottery collected from the JR3 roadbed was all post-Iron Age, predominately Iron Age and Byzantine.

At the local perspective, the acropolis overlooks this road as it passes by the western end of the tall, as well as a wide extent to the northwest and southeast. The acropolis also overlooks the eastern surface of the tall where a possible entrance ramp (Field B) has been partially excavated. The road's location and alignment will help clarify Tall Jalul's approach topography. From an inter-regional perspective, the northwest-southeast alignment of the ancient road past Tall Jalul, plus the presence of Roman and Byzantine sherds, is consistent with reports of "Roman" roads lying southeast of Tall Jalul, specifically from Nitl to Umm ar- Rasas (Piccirillo 2001). Future exploration to discover further travel connections will enhance our understanding of Tall Jalul's regional interactions.

Reference

Piccirillo, M. "The Church of Saint Sergius at Nitl" *Liber Annuus* 51 (2001), 267 – 284.

Tall Jalul

Project Name: Excavation and Survey at Tall Jalul / Madaba Plains Project (MPP)
Duration: May 31 – July 9
Sponsor: Institute of Archaeology, Andrews University / USA
Director: Karen A. Borstad
Representative: Reham Haddad

Survey Report

The goals of the 2007 season were to locate built roads in the vicinity of Tall Jalul and plot them in a digital map (GIS). The research method for an 8-day pilot season was ethnographic interview. Reham Haddad, the Department of Antiquities representative, interviewed our informants and Dr. Theodore Burgh, University of North Carolina – Wilmington, assisted with site photography.

Ethnographic interviews in the village of Jalul led to the location of road remains described variously as the "old way" and "the road from Muniya to old Jalul". Extant sections of this road were located in three discontinuous segments and mapped from the northwest to the southeast as Sites JR1, JR2, and JR3 Site JR1. The visible road extended for approximately 350 meters, with termini at a field boundary fence (northwest) and at a modern house (southeast). In the northwest half no built roadbed was visible between the edging stones, estimated generally as four meters apart. A series of stone clusters lined the eastern edge for a length of 150 meters; they appear to have been cairns, but are now reduced to one course above a mostly below-ground level. The shape of these clusters was generally oval with varied lengths (1.7 to 3.8 m.) and widths (1.5 to 2.9 m.). Their spacing along the eastern edge was irregular, ranging from 1.3 to 7.7 meters apart, thus appearing to be roadside burials rather than road markers. The final 10 meters of JR1, up to the modern house, appeared as two edges approximately 6 meters apart, relatively undisturbed and distinct but with no apparent built roadbed. Preliminary analysis of the 110 pottery sherds collected from within the roadbed were primarily Iron Age and Byzantine.

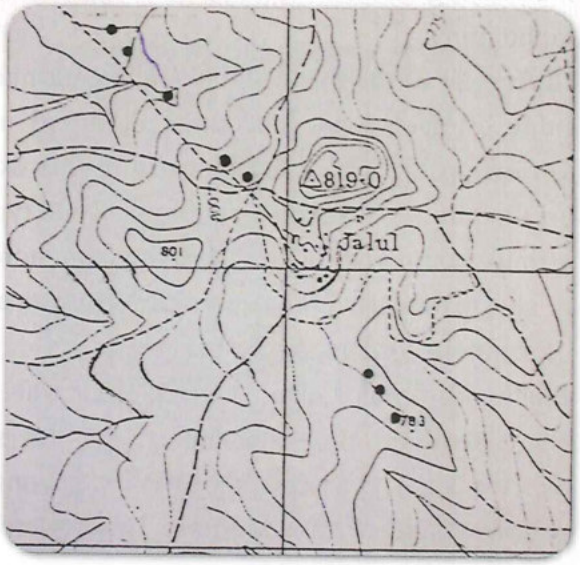

Fig.1: Ancient Road sites by Tall Jalul from northwest to southeast, JR1 (3GPS points), JR2 (2 GPS points), and JR3 (3 GPS points)

Fig.2: JR3, view to the north. Tall Jalul in upper right background

Significant Results: The short season demonstrated that the site was not totally deflated, and that there was in situ evidence for undisturbed use of the site. In general, it appears that Epipaleolithic visitors to the site may have erected the buildings that are visible today, although the earliest visitors probably did not construct them. It appears that later visitors to the site (in the Late Neolithic period, as demonstrated by two surface arrowheads adjacent to the 1dS2 trench) altered the arrangement of at least some of the large wall stones in one or more of the older structures.

Conclusions: While the shoreline of the qa revealed intensive use of its seasonal resources during the LPPNB through the Chalcolithic/Early Bronze Age periods, an even earlier period of exploitation is present at Site 1d. The most characteristic artifacts in the in situ deposits are bladelets, with blades and flakes very scarce in the recovered inventory. Cores were also rare, but they were all very small, and most were bladelet cores. This all indicates that the earliest occupations date to the Epipaleolithic period, and on the basis of a lunate recovered from the surface during the 2002 survey, this might reflect a Late Natufian presence. On the other hand, a short arrowhead made on a bladelet that came from c. 30 cm below the surface in 1dS2 suggests that we might have evidence for a "Desert PPNA" presence, which so far has eluded recognition in the Jordanian badia.

One of the major activities pursued by some of the early residents at Site 1d was the manufacture of beads, evidenced by three beads from the excavations as well as more than 20 drills, most made on narrow bladelets. There were many burin spalls in the probes as well, and while some were used to manufactures drills and borers (a characteristic of the Late Neolithic), preliminary examination suggests that bladelets were the preferred blank for drill production.

Recommendations: Site 1d is well worth further investigation: we obtained important results in the small areas we examined (only 0.4% of the total site area), and a more concerted effort with a larger team would likely be able to place the camp in more rigorous cultural, temporal, seasonal, and activity contexts.

Touristic Benefits: In view of the location of the site far into the badia, there is no touristic value to Site 1d at Jabal adh-Dharwa.

Fig. 3: Large structure 1dS1 prior to excavation, view to the east.

Fig. 4: Domestic structure 1dS2 prior to excavation, view to the south.

Jabal adh-Dharwa 1d

Project Name: Eastern Badia Archaeological Project
Duration: Five days (October 13-17)
Sponsors: Whitman College (USA) and East Anglia University (UK)
Directors: Gary O. Rollefson and Alex Wasse
Representative: Ahmad Lash

Historical background: As a follow-up to a survey season in 2002, the authors revisited Jabal adh-Dharwa Site 1d to investigate the likelihood of in situ artifacts in this hunting camp that appears to have been occupied during the Epipaleolithic (possibly Late Natufian or earlier) and the Late Neolithic period.

Geographic Location: The site lies about 80 km east-southeast of Azraq ad-Duruz, near the southern edge of a qa at UTM coordinates 37 359 550E and 350 2842 N at an approximate altitude of 660 m.

Objectives of the Project: The 2007 season aimed specifically to determine by limited test excavations whether there were in situ surfaces associated with artifact scatters noted during the 2002 survey season.

Area Explored During the 2007 Season: The site covers a minimum of 1255 m2 and includes six or seven circular or C-shaped enclosures that seem to have been domestic buildings, plus a large curvilinear structure at the edge of the qa at least 8 m in diameter that seemed to have a non-domestic character to it. We placed a 1 x 2 m trench across the wall of this last building (named 1dS1) and excavated to a depth of 30 cm, below the bottom of the wall stones, where a patchy surface was reached; we did not excavated to sterile deposits of bedrock due to time constraints. We also excavated a 1 x 2 m trench (1dS2) inside one of the domestic structures near the top of the knoll on which the site is located. Here 10 cm were excavated in the southern 1 m2, while 30 cm were excavated from the northern square meter. Once again, only patchy surfaces (interrupted by much bioturbation) were encountered, and neither sterile soil nor bedrock was reached. Finally, on the last day a 1 x 1 m trench was excavated to a depth of 15 cm inside another "domestic" structure near the top of the knoll, and while chipped stone artifacts were found throughout the probe, no identifiable surfaces were found. We did not have time to excavate this trench (1dS3) to sterile deposits or bedrock.

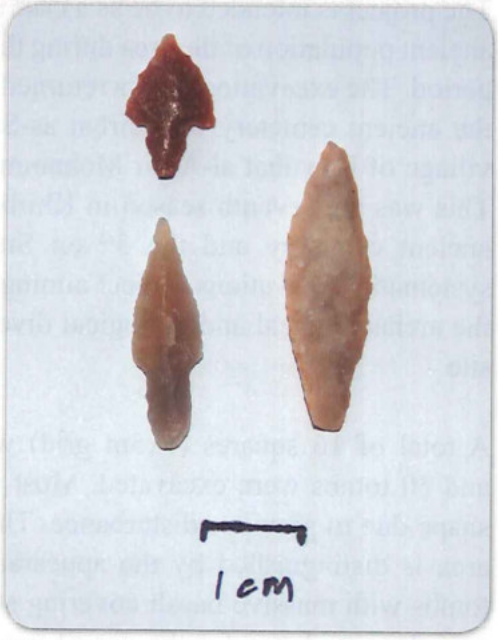

Fig.1: Two Late Neolithic arrowheads from the surface are on the left; an arrowhead on a bladelet (on the right) is from in situ deposits.

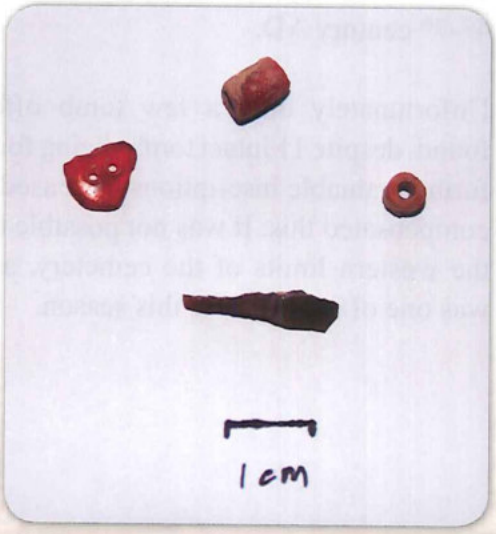

Fig.2: Three beads (all carnelian) and a bead drill from excavated sediments from the 1dS2 structure.

Khirbat as-Samra

Project Name: The 7th Excavation Season at Khirbat as-Samra Ancient Cemetery- 2007
Duration: 28/ 7-6/9 2007
Sponsor: Abteilung Humanbiologie and private donations.
Director: Dr. A. Nabulsi
Representative: Naser Khasawnah

The project is intended to be as a case study on the ancient population of the area during the Byzantine period. The excavation works returned to Site C of the ancient cemetery of Khirbat as-Samra in the village of Rawdhat al-Amir Mohammad, Mafraq. This was the seventh season in Khirbat as-Samra ancient cemetery and the 3rd on Site C of the systematic excavations project aiming to examine the archaeological and biological diversity of this site.

Fig.1: Khirbat as Samra Cemetery Excavation 2007 Site C: General view.

A total of 16 squares (5x5m grid) were opened and 50 tombs were excavated. Most were in bad shape due to previous disturbance. The excavated area is distinguished by the appearance of large tombs with massive basalt covering stones. There is a clear evidence for the use of wooden coffins as indicated by *in situ* findings. The excavation revealed new aspects to the above-mentioned diversity. This new obtained information may be helpful in understanding the structure and dating of the cemetery that is believed to belong to the 4th-7th century AD.

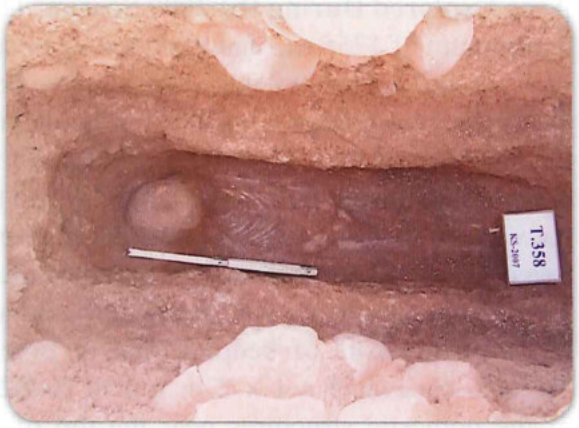

Fig. 2: Khirbat as Samra Cemetery Excavation 2007, Site C, Tomb-358: Child burial.

Unfortunately only a few tomb offerings were found, despite 11 intact tombs being found. Finding further valuable inscriptions on reused tombstones compensated this. It was not possible to determine the western limits of the cemetery, although this was one of the aims for this season.

A smaller gate (postern) was identified on the Western slope. It leads through the inner walls for walkers on the Western segment of the Roman road.

In the Northern face the aerial photographs reveal a straight track in the direction of al- Khalidiyya. This track is in the right place to connect with with the main Eastern Gate of the fortress. On the exact location when this track crosses the enclosure wall, we checked that the general direction of the layout of the main buildings gets a different direction. It is convenient for the gate and passage.

Every wall in that sector was identified and surveyed, despite the bad condition of preservation, only existing as foundations. Meanwhile any route was examined. We have to take in account that the area was deeply transformed and restored all along the five periods of occupation: restoration of the Roman settlement, introduction of a small Byzantine church, rebuilding of a strong Omayyad building, an Ayyoubid farmyard, and finally, a Turkish barrack. No passage way was detected, but the hypothesis is still in consideration.

In the Southern sector of the site, outside the area enclosed by the Department of Antiquities, antique buildings were totally buried by a huge dump of domestic occupation and material construction out of use. A stratigraphic section associated with a building that was identified as previous to the enclosure wall, from the Roman period, shows thick ashy layers succeed with a heavy refuse construction material. Meanwhile a huge deposit of grey silt could come from the repetitive cleaning of the close birkeh.

The Roman building 51 is placed inside the enclosure wall, but it precedes the later. It measures 25 m long and 6 m wide. It could not be domestic. Only the eastern part was excavated. The lower part of the building was filled up with mud. A bad restoration of the western wall of the chamber shows a latter reuse. The inner area is separated into five chambers by lower partition walls. The partition walls do not reach more that 60 cm high and were probably supporting a wooden floor. All chambers are in communication through narrow well built openings on the lower level.

In the preserved part of the main walls, not a single door was discovered. It was a basement reached by a lader. Against the Western wall, we cleaned a water channel wich exits through the enclosure wall. As it is without a supply system, it is probably a place to throw used waters or a place for sanitary activities.

- The Roman fortress has been dismantled at the time of the building of the churches.

The excavation of the so called «white building» on top of the West slope (60-61) provided evidence concerning the links between this building and the wall. This building 60 during its original phase preceded the enclosure construction. The enclosure wall later on to joined the white building which is converted to a defensive function. We are not able to evaluate precisely the time between the construction of the white building and that of the wall. The information obtained from the section interpretation suggests the time interval was probably less than one century.

The layout of the enclosure wall poses some question about the area of the building development. There are only three limestone white buildings. They could be connected with Roman army activities. These three are surounded by large domestic compounds spread from the centre of the site in various directions. According to the building grid we suggest that the enclosure wall was planned to be much larger than the built area in that period to include free sectors for future buildings. The free sector was then built against the wall with perpendicular axis according to each wall segment. The southern area was not built and is still free of construction.

Fig.2: Building 12/ The three successive floor according to the occupation Periods

Why was it necessary to build an inclosure wall, weak in its way of construction, since no defensive purpose is served? The wall is not a rampart. Protection from nomads is not an enough reason for a so massive project. It could not resist siege engines due to its narrow width, 75-80 cm. Such a wall could provide only minimal protection whihc cannot have been its real function. The most probable purpose was to provide a social status to the settlement and confer some kind of prestige in the shadow of the neighbouring cities of the Decapolis. We suggest that the enclosure wall building was the right reason for giving a precise name for Samra, that of Hadeitha, «The new town».

Until recent years, we consistently failed to locate any gates in the enclosure wall. During Antiquity walls and ramparts were normally provided with 4 or 5 gates with hierarchic purpose and value. We have not been able to locate the main gate on the eastern front of the wall. This front faces East, the direction where the Roman road crossed 600 m away. A rectilinear track is clearly visible on early photographs. It originated from the vicinity of the Roman inn and runs toward the Northern segment of the Roman road. It connects the side of the Turkish barracks now occupied by the archaeological team. We are expecting for the moment that this track was in use till the end of the Omayyad period: The byzantine and later cemetery respected the track. This means that the route coming from Azraq was still in use till the end of the site occupation. An anomaly under the turkish houses reinforce this hypothesis. Excavation is not possible on that spot.

Khirbat as-Samra

Project Name: Khirbat as-Samra Archaeological Programm of Research.
Duration: 31 August 2007
Sponsor: Jean-Baptiste Humbert
Director: Alain Desreumaux
Representative: Khaled al-Jnaydeh

The Samra archaeological programm of research is devoted to comprehensive understanding of the installation of an antique village located in the steppic range of Eastern Jordan. The earliest cultural development in this area is connected with the Roman Via nova construction at the beginning of the 2nd cent. AD.

Since the year 2000 the aim of the project has been to clarify the context of the village. The previous work in a Roman inn (mansio) provided coherent material documentation for the period 130-250 AD. The aim of the project is to identify in the ruin the levels corresponding to the foundation of the Roman Via and to the occupation of the Roman inn.

We attempt to develop a sequence between the successive periods of occupation on the site:

1. The foundation of the Roman road and its development connected to Roman inn;
2. Military or administrative compound connected with the Roman occupation;
3. The building of enclosure wall all around the settlement;
4. The building of a large Roman fortress dated from the last years of the 4th cent. AD;
5. The spread of many churches inserted in the ancient quartiers.

Fig.1: Building 60/ Foreground :the first Phase plaster floor

The 2007 season took place during August. It provided some evidence regarding these questions.

- Investigations of well built buildings in white limestone, contemporaneous with the establishment of the Via and the occupation of the inn.
- The construction of the enclosure wall occured early to lay out an area devoted to future development.

site has a major MB II-III occupation (around 1 ha.) followed by an Iron Age I-III one and a Roman-Byzantine small farm along the eastern bank of the river.

Tall as-Sukhna North (JADIS nr. 2517.027) – the site lies on the east bank of the river around 1 km from the join with Wadi adh-Dhulayl. It was already surveyed in the 1990s (Chesson et al. 1995; Palumbo et al. 1996: 385-386, 401-403, tab. 6; Palumbo et al. 1997: 14; Nigro ed. 2006: 4, note 2). The new visit to the site produced a complete plan of it for the Rome "La Sapienza" Expedition to Jordan - Upper Wadi az-Zarqa – GIS, and collected some C14 samples from a burnt EB IIIA house visible in a section on the southern cut of the north-east sector of the site.

al-Bira (JADIS nr. 2417.021) – One of the main sites visited along the western bank of the river was al-Bira (Nigro ed. 2006: 4, note 2), arising upon a basalt spur overlooking a turn of the river (Fig. 4). The site was occupied in later periods, mainly Hellenistic, Roman, Byzantine, Umayyad and Mamluk (Iron Age II-III is also possibly present), hosting a fortress in the Roman and Byzantine periods. EB II pottery sherds hint at the presence of a rural village underneath later more massive occupations and fortifications, possibly integrated in the Khirbet al-Batrawi territorial system as like as Tall as-Sukhn North.

Masarra (JADIS nr. 2317.021) – this Roman and Byzantine site, also excavated by Romil Ghraiyb, has provided some sparse EB remains, which suggest that it supplied, with its olive trees, oaks and pines, one of the basic resources (olive oil and wood) for the major urban sites of ar-Rusayifa and Khirbat al-Batrawi.

at-Tall (JADIS nr. 2317.032) – the site occupies a panoramic hill in an impregnable location and shows a EB I occupation (cup-marks and a rock-cut circular cistern), followed by scanty remains of an EB II settlement, almost completely destroyed by a Byzantine tower and its annexed devices. Scattered MB, LB and Iron Ages fragments are also present.

Al-Qihati/Khaldiya (JADIS nr. 2717.006) – the site is on top of a major hill dominating the easternmost branches of Wadi adh-Dhulayl overlooking the tracks through the desert towards Azraq and Qasr al Hallabat. Sparse EB materials hint at the presence of an outpost, while the major spur is occupied by a square Byzantine fort.

Conclusions:

The third season of excavations at Khirbat al-Batrawi was devoted to the protection and the consolidation of the major monument at the site, its magnificent city-wall and the gate with an inner staircase, dating back from the Early Bronze II-III (2900-2300 BC). In the meantime, Rome "La Sapienza" Expedition carried out a survey of the area specially focused on Early Bronze Age remains in order to settle the site in its regional and historical context.

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Survey of the site surroundings:
A systematic survey of the hills and the quarters of the modern city surrounding Khirbat al-Batrawi was carried out with the specific aim of identifying the ancient paths connecting the Early Bronze Age town to the underlying river and to locate the ford in the river banks. This was individuated just north of a rocky spur which narrowed the river banks and contained the site of Jneneh (JADIS nr. 2516.016; Nigro ed. 2006: 50-51, figs. 1.4, 2.16, maps 4-5). A fresh examination of pottery on the surface of the latter site demonstrated that it was occupied not only in the Iron Age II-III, but also in the Early Bronze I. The discovery of a series of "cup-marks" and rock-cut mortars on the rocky spur dominating the river in correspondence of this site corroborated this hypothesis, suggesting that the EB I settlement was abandoned when the people moved to the top-hill site in the Early Bronze II, founding the fortified town of Khirbat al-Batrawi.

Fig. 3 : Particular of the eastern jamb of the restored EB II city-gate with the cracks of the earthquake which brought to the end the EB II city.

Survey of the Upper Wadi az-Zarqa (north-west sector):
The sites examined were all already known, and were selected among those of sure or possible Bronze Age occupation within a radius of 25 km from Khirbat al-Batrawi (major EB I sites on the right bank of the river and north of the junction with Wadi adh-Dhulayl, like Jabal al Mutawwaq and Marajim, have been omitted).
Khirbat ar-Rusayfa (JADIS nr. 2415.076) – the site, in spite of a drastic cut which reduced its dimensions to almost one fifth of its original extension (probably up to 10 ha.), has already been thoroughly excavated by Romil Ghrayib (Nigro ed. 2006: 5, note 4). It had substantial occupations in the Early Bronze Age II-III and Middle Bronze III: a 2 m thick wall is deemed by the excavator to be a fortification line of the Early Bronze (EB III according to our survey); while a MB III/LB IA monumental building (possibly a governor's residency), which provided a rich set of materials (big pithoi, jars, jugs and painted vessels), hints at the role of central place for this town in the Zarqa ar- Rusayfa district during the pre-classical periods. The site shows also substantial Roman and Byzantine occupations.
Tall as-Sukhna South (JADIS nr. 2517.002) – the

Fig. 4 : View of the Upper Wadi az-Zarqa Valley from the top of the site of Tall al-Bira.

Khirbat al Batrawi

Project Name: Pilot Project of Archaeological Investigations on the Bronze Age Urban Development at Khirbat al-Batrawi in the Upper Wadi az-Zarqa Basin
Duration: five-year project; May 28th - June 19th 2007 third season
Sponsor: Rome "La Sapienza" University, Italian Ministry of Foreign Affairs
Director: Prof. Lorenzo Nigro
Representative: Romel Ghrayib

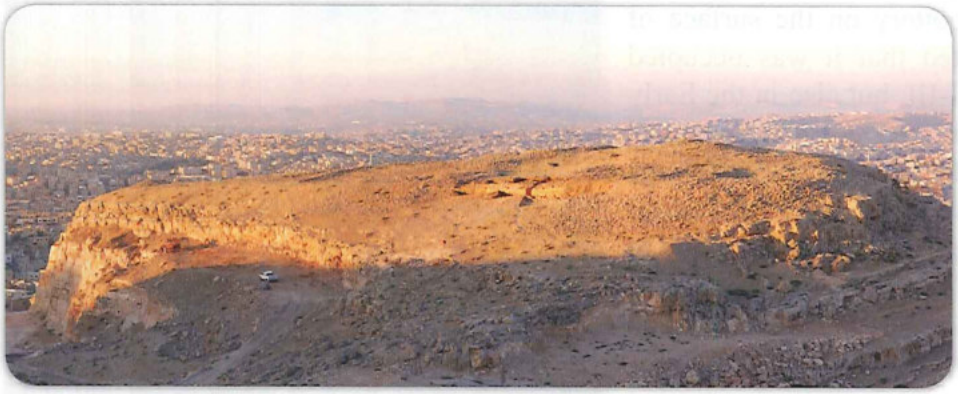

Fig. 1: General view from north of the site of Khirbat al-Batrawi with the restored stretch of the main EB II-III inner city wall and the EB II city-gate.

The third season of excavations at Khirbat al-Batrawi (Lat. 32°05',218" N, Long. 36°04',237" E), an Early Bronze Age fortified town in the Upper Wadi az-Zarqa, was carried out under the auspices of the Department of Antiquities of Jordan between May 28th and June 19th 2007, and was focused, for this year, on extensive and systematic restorations of the EB II-III city-wall and city-gate, and on a survey of Early Bronze Age sites in the Upper Wadi az-Zarqa, with special reference to the modern urbanized areas of Zarqa and ar-Rusayfa.

Fig. 2: The restored EB II city-gate, from north.

Work at the site:

Work on the site of Khirbat al-Batrawi was concentrated in Area B, where a 30 m long stretch of the main inner city-wall had been excavated in previous seasons (Nigro 2006: 240-246; Nigro ed. 2006: 175-196, plans III-IV), and where restorations with antique-like mortar were carried out (Fig. 1). Restorations also allowed the better identification of the different constructive phases and building techniques of the wall itself. The city-wall is preserved up to 2.3 m to the west, and around 1.8-2.0 in the area of the gate. The gate was restored (Fig. 2), with special attention to its jambs, which show the cracks of the earthquake which destroyed the EB II city (Fig. 3). At the same time a large amount of collapsed and erratic stones were removed from the site, in order to enhance the readability of the urban topography and to facilitate the widening of excavations in the next season.

Thanks to the restoration work, the Batrawy city-wall stands as one of the best preserved monuments of this kind in the region, and hints at the resources and capabilities of the local community during the Early Bronze Age.

Fig3:House North Apse

House excavation:

A house was chosen that had been partially destroyed by a well. The most damaged part was excavated to establish the main facts in order to plan the future excavation of the rest of the house.

An important aspect of the house was its excavation in the bedrock (Fig.3). The original house was the typical Mutawwaq habitation structure (elongated and oval form floor) with the entrance in one of its long sides (Fig. 4). At the bedrock, that served as the house floor, some wells were excavated. This was the most ancient building occupation. A person was buried in the house, possibly at the end of this phase. Their skeleton was destroyed by later constructions.

In a second stage the entrance was blocked and a little wall was erected over it. The rock floor was broken so as to open a cave that was under it. The entrance to the cave was formed by a short stone wall that was built over a brown soil stratum. This building was the cause of the destruction of the burial.

In spite of the destructions suffered by this side of the house, its excavation allowed us to establish the building history that, we expect, can be clarified in the next campaign.

Oddly practically no flint tools nor pottery have been found in the house. Only the remains of two storage pots without any decoration were found.

Fig.4:House: The Entrance

Conclusion:

As stated we are studying the possibility of making a viable project that allows tourist visits at least in the dolmen necropolis. The environment's natural beauty and the conserved monuments make it seem that it would be possible.

Qasr Usaykhim

Project Name: The Seventh Archaeological Campaign at Qasr Usaykhim
Duration: 18th to 25th of July 2007
Sponsors: The Italian Ministry of Foreign Affairs, Department of Antiquities of Jordan, Istituto Superiore per le Techniche di Conservazione dei Beni Culturali e dell'Ambiente "Antonino De Stefano", First School of Specialization in Archaeology of the University of Rome "La Sapienza"
Directors: Dr. Maysoun Al Khouri, Dr. Fawwaz Al Khraysheh, Prof. Giuseppe Claudio Infranca
Representative: Aref Al Dehethim

The site of Qasr Usaykhim is situated on the north eastern side of Jordan in the black desert called Badiya, in the district of Zarqa'. This Desert Castle belongs to the Limes Arabicus, which is the eastern Roman frontier in Province Arabia. The Castle faces Wadi Usaykhim to the south and the contemporary Qasr al Azraq to the northeast, which is about 19.2 Km away.

Fig.1: Genral view of the area before the excavation

Archaeological excavation and then conservation of one of the areas discovered during the last mission in 2005 near village number3, when traces of a big monument constituted by five large stone circles and connected by big stone walls were found. This area is located 3km to the north eastern side of the Castle. The monument could be a big tomb or, given its dimensions of (25 m diameter) could be a sacred place from the Chalcolithic and Bronze Age, as dated by the ceramics and the flint stone tools recovered on the surface. We called the area the Temple Area,and the objective of this season was to examine this big monument.

The Excavation:

The first operation was to survey the site to make a plan at 1:200 scale. The whole area was then divided into four sections (α β γ δ), followed by superficial cleaning removing the small gravel and stones revealing any structures. The cleaning operation was documented with photos and identified 16 structures, partially or totally collapsed. 15 of these had circular form and the last one had no definable perimeter but had traces of canalization in the rocks that maybe had a hydraulic function.

Fig.2: Particular view of the wall structure A

The other benefit of this solution would be to stop vegetation growth. Reeds and trees hide the archaeological structure and roots make a strong destructive force. Given the discoveries and the way the walls need to be consolidated, only a new project could provide solutions for the next decades, considering both ecological and archaeological aspects. A complete documented state of the monumental remains and a diagnostic could help the project.

Tourists benefits

As the site is in south Azraq and the storage of the carved stones is in north Azraq (Qalat), it would be interesting to make a link between the two sites by informing the guides and guards, etc. Panels could also provide documentation and commentaries about the reservoir and its decoration.

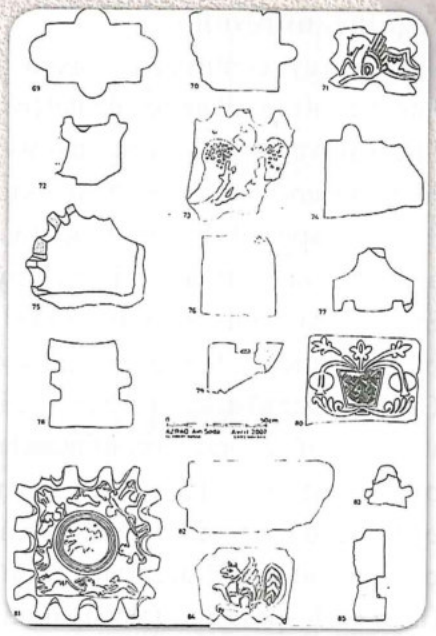

Fig.5: Some drawing of Carved Stone

chronology using OSL (Optically Stimulated Luminescence) in deposits beyond the range of radiocarbon dating. OSL determinations will be obtained at the Oklahoma State University Physics Department by Dr. Regina Dewitt-Kalchgruber.

This study is part of a larger project titled: Linking Flora and fauna using phytoliths and palynomorphs in SW Asia and Africa, funded by an NEH-ACOR grant. This project attempts to explore the sharing of flora between the African and Eurasian landmasses during the Pleistocene. The understanding of this sharing will help explain many aspects of climate change that facilitated migration of fauna, hominids and humans between the two landmasses. Ultimately, this project will also include studies of warming periods in the past, through the study of Afro-tropical vegetation in SW Asia. Therefore, the study focuses on obtaining diagnostic phytoliths from key species associated with African flora in Jordan.

'Ayn as- Sawda, Azraq Wetland Reserve

Project Name: Recovery of microbotanical remains and OSL dates from Pleistocene and Holocene deposits in 'Ayn as-Sawda, Azraq Wetland Reserve
Duration:12-15 June, 2007
Sponsor: National Endowment for the Humanities (NEH)-American Center for Oriental Research
Director(s): Dr. Carlos Cordova and Dr. Gary Rollefson
Representative: Mr. Ahmed Lash

The drying of the 'Ayn as- Sawda Pool in the early 1990s exposed a wealth of artifacts and deposits of various ages. Subsequently, excavations carried out by Phil Wilke and Leslie Quintero (University of California, Riverside) and Gary Rollefson (Whitman College) recovered artifacts of ages ranging from the Lower Paleolithic to the Epi-Paleolithic and Neolithic. The excavations produced large amounts of faunal remains, and these suggested the changing of habitats in the area over time. To better understand faunal habitat change, a project involving paleovegetation, paleofire, and paleograzing conditions is underway.

The June 2007 season aimed at recovering microbotanical material (pollen and phytoliths) and other palynomorphs (microscopic charcoal and fungal spores) as proxy data for reconstructing the habitats of the local prehistoric faunas, including some extinct species, and the vegetational resources of the hominid and human populations inhabiting the springs and the wetland.

The geoarchaeological interpretation of the sedimentary sequence excavated this season suggests a change from lacustrine clays and dry lake beds, to densely vegetated wetland and finally to accumulations of spring deposits and alluvial silts (Fig. 1). An organic wetland deposit of Epi-Paleolithic age is interpreted as similar to the modern wetland reed area in the modern preserve (Fig.2). Ash layers embedded in the Epi-Paleolithic wetland deposit suggest episodic burning. Microscopic counting of burned phytolith and other palynomorphs will help build a chronology of fire and grazing of the wetland vegetation.

In addition to the paleobotanical reconstruction, this study focused on obtaining a tighter sedimentary

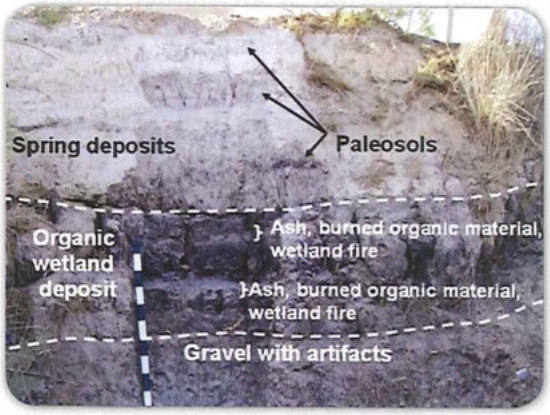

Fig.1: Excavated section. The black mat is a prehistoric wetland deposit formed under conditions similar to the modern wetland (See Fig. 2)

Fig.2: Modern wetland dominated by Phragmites australis and other aquatic graminoids.

We assume that they were massive constructions with a platform on top, accessible by a ladder or light staircase. Several rooms were cleared out along the eastern curtain wall of the fortress, and some soundings showed that other rooms were aligned along the northern and southern curtains walls: they will be excavated during the next season. In parts of the eastern area of the site, the rooms clearly showed two phases of occupation, still to be dated. In the center of the building, part of a large courtyard was cleared out, empty of any construction but the cistern; the next season will expose the courtyard to its full extent.

Fig.2: Umm Hadar: The Fortess

The archaeological material includes mainly pottery and other terracotta lamps; a couple of spindle-whorls were uncovered, as well as a few bronze objects. Among the three coins of the season, one is from the Seleucid king Demetrios II, ca 140 BC. This corresponds exactly with the bulk of the pottery, of Hasmonean type, dated to the second half of the 2nd cent. BC - first half of the 1st centuryBC, with very close parallels with the pottery uncovered at the nearby palaces of Jericho.
This small fortress evidently had a military function on a 'border': when, why, and who was on each side of the border will be the questions to be answered by further excavations.

Umm Hadar

Project Name: Wadi al Kafrayn Project 2007
Duration: 11 January – 1st February 2007
Sponsors : IFPO (French Institute for the Near East), CNRS (French National Centre for Scientific Research), University Paris-1-Sorbonne, Private sponsorship (Company Degrémont, France)
Director: Dr. Jean-François SALLES
Representative : Yazid Alian

The aim of the 2007 season was to explore the fortress plan and its construction, and to empty the cistern, which is 4m in diameter, with a small decanting basin to the West. There was no trace of any channel for the supply of the cistern, and it would have been filled by rainfall only, possibly also by water carried by hand from the neighbouring rivers. The cistern was most probably covered with a light roofing, made of palm-tree leaves on beams: the burning of that structure was found in the earth fill of the cistern, which also provided a very large quantity of pottery sherds, mainly large jars and cooking vessels, with a very small number of table vessels. As this pottery is contemporary with the ceramics found in the other rooms of the fortress, we must conclude that the cistern was filled up at the time when the fortress was destroyed (there are traces of burning and destruction everywhere), the date of the event yet to be determined, somewhere at the end of the 1st cent. BC or the beginning of 1st cent. AD. The excavation reached 6 metres under the edge of the cistern, which is not fully emptied yet; the plastered coating of the walls of the cistern is beautifully preserved.

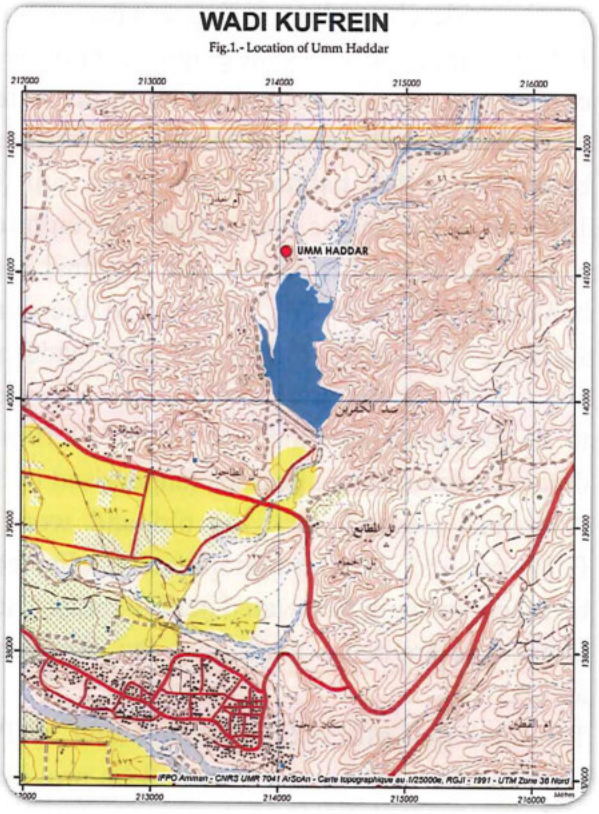

Fig.1: Location of Umm Hader

The western section of the fortress was extensiveley excavated. The foundations of the enclosing wall and of the inner partition walls are made of undressed stones, carefully blocked with rubble, while the elevations of the walls were everywhere made of mudbrick, several fragments of which were located scatered around. The protuding square towers (about 6 x 6 m) of the northeastern and southeastern corners were filled with earth, and no entrance was found.

profile, but it was impossible to recognize slag in this way. Further study will provide locations of interest and these will be studied on the ground later this year.

3. On the request of archaeologists from the exhibition preparation team of the new National Jordan Museum three pull-offs were made during three weeks, organised by PICO Art International (Mr Alfred Tan), for the design of the exhibitions. The making of pull-offs hardly occurs outside Dayr `Alla and concerns the glueing on cloth of a stratigraphic section in an excavated square. This is generally done for documentation ("take the baulks home") or for instruction as well as aesthetic reasons. The purpose for the museum is to show the principle of stratigraphic chronology, using a representative site in Jordan. Since the full stratigraphy cannot be given on one section (and pull-off) three locations were choosen by the two co-directors at Dayr Alla, representing the beginning of full habitation on virgin soil (MB II, a 1700 BC), the major destruction and cultural change at the end of the LB-period, and the final centuries of habitation (9th-4th cent. BC), up to the current top-surface of the tell. Three pull-offs were made, measuring about 2.75 – 2.90m high and 1.20m wide, probably all to be fashioned into the size of 2.75x1.10m. A small digging team of three persons (supervised by Ms Raida Abdullah) cleaned back the old and worn sections. Potsherds, etc. were stratigraphically collected and will be processed with the related period-study. The glue and cloth were applied according to the experience of the author.

The three pull-offs will be framed later by PICO, and explanations and context data will be provided by this author.

Fig. 3: pull-off 1, with virgin soil, has been glued

Fig. 4: pull-off 3, cloth is being firmly applied, with Mr Hussein el Jarrah below

Dayr ʻAlla

Project Name: Archaeological Study of Dayr `Alla and Region
Duration: 15 March – 15 May
Sponsor: Leiden University, Yarmouk University and the DoA
Directors: Gerrit van der Kooij and Zeidan Kafafi
Representative: Hussein el Jarrah

The study season was concerned with the Dayr `Alla Project and its compnents and dealt with three subjects:

1. Study of materials from the excavations, dating from the Iron Age, for final publication. Most work dealt with pottery, in particular the technology of production (by Mr Nield Groot) and use, as well as specific photographic documentation – fig. 1 (Dr Gerrit van der Kooij). The study of production technology is completed with (near-) complete vessels, and will be tested further archaeometrically (especially for mineral/chemical composition) with sherds from fragments of vessels. The study of use is part of the study of use of space.

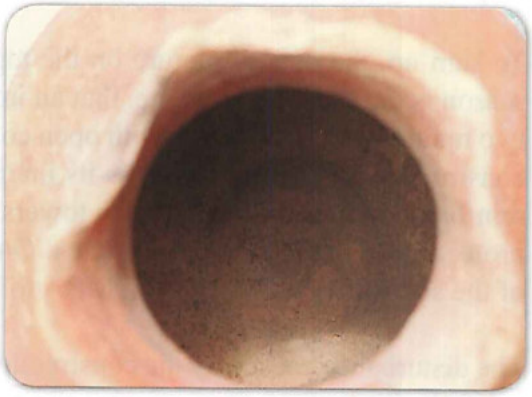

Fig.1: the bottom of a Phoenician jug from 9th century BC phase IX shows traces of being closed by upside-down slow throwing

2. Start of the Iron Track of Jordan Project: the project concerns the study of the landscape along and besides the western part of the Wadi Zerqa roughly between Maghiret Warda (the iron ore site) and Tall al Hamma (the iron production site) in order to find out about any traces of activities dealing with iron production. The first step in this project is the interpretation of satellite images of many kinds, including hyperspectral, multispectral and radar images, in order to identify such traces, be it other ore sources, other smelting sites, places of charcoal production and the like. This work is done by Delft Technical University (Mr Frank Dentz, supervised by Dr Ramon Hanssen). We have produced (over two weeks) ground truth information to be compared with the satellite data. This information was collected by a field spectrometer (ASD Fieldspec Pro FR), measuring the reflectance of visible light and infrared of the soils. It appears that soil/stone with iron contents and soil with ash both have a unique sprectral

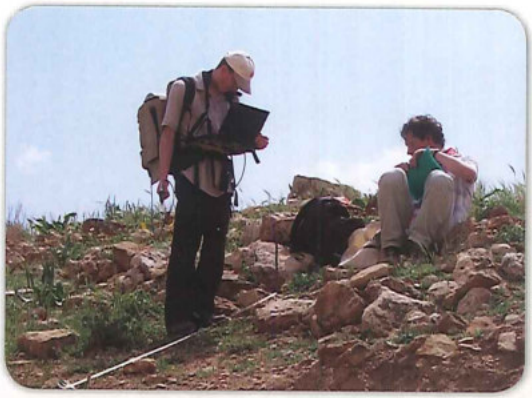

Fig.2: Mr Frank Dentz (left) uses the spectrometer on Tulul adh-Dhahab Gharbi, with Mr Niels Groot

Work was continued in trench P15 , on the east slope of the tell, which produced in the previous seasons, among other important finds, a metallurgical tabun-type furnace. During this season, work on its deeper levels reached the bed rock and revealed successive strong walls built of irregular small and large stones and mudbricks. Following the stratigraphy of this trench, seven layers have been distinguished, corresponding to at least three main phases of construction and activity on this part of the tell. It has been suggested, that habitation in this area continued from the end of the LBA to the late Iron Age.

Finally, an effort to locate additional tombs, on the eastern foot of the tell (trench 021), was not productive, but revealed part of a strong, thick wall (visible length ca.5.0m, height 1.6m , width l.2m) running E-W, built of large irregular stones and well-preserved mudbricks on its superstructure. It may be interpreted as a retaining wall.

To sum up, the overall picture on the top of the tell, as has been revealed by the work of the 2007 season is more or less clear, i.e. that an important and monumental building stood there, consisting of two main rectangular rooms with open courts to its northern and southern sides and at least three well-constructed doorways leading to its interior. A mighty double defensive fortification wall, probably reinforced at intervals with watch towers enclosed the upper perimeter of the tell, providing efficient protection of the settlement complex. On the basis of the pottery, it can be suggested that habitation of the site was continuous from MBA to LBA and down to the end of the Iron Age.

The disturbance caused by the construction of Islamic tombs on the top of the tell prevents us reaching a definite interpretation concerning the probable use and chronology of the above mentioned building. Whether this was a local sanctuary or an administrative and agricultural centre meant to control the trading roads and utilize the surrounding fertile area of the Jordan valley is by no means certain. Further work on the tell will certainly give an answer to this.

Irrespective of this, the results of this year are very important and promising further interesting finds and we strongly recommend the continuation of our project.

Tall al Kafrayn

Project Name: Archaeological Investigations at Tall al Kafrayn in the Jordan Valley
Duration: 6-30 March 2007
Directors: Profs. Thanasis and Spyridoula Papadopoulos.
Representative: Nidal Al Hindawi

The seventh excavation season project was continued by a team of Greek archaeologists and students at Tall al Kafrayn both on the top and the SE slope of the tell.

As it is already known from our previous excavation reports and the relevant literature, Tall al Kafrayn seems to have been a very important and strategic site, controlling all the surrounding area and the routes of communication 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.

At the top of the hill, where a complex of buildings has been partially revealed during the last two seasons (2005-2006), further work on 14 new and 4 old trenches brought to light new architectural remains and finds, indicative of an important settlement there.

On matters of detail, trench P13 produced only a few sherds but no architectural remnants, while part of a thick wall running E-W has been revealed in the adjacent trench P14 where a rectangular cutting on the bedrock(2 x 1.3 x 0.5m) could be interpreted as a reservoir for collecting and storing water for domestic use. Continuing work on trench N13, nearby at the centre of the tell's top, the walls of a roughly rectangular room (3.5 x 3.1m) have been unearthed, built of stones and having a floor partly formed by cut bedrock. The presence of some Islamic tombs prevented its complete clearance. It is important to note, however, that there is a well-preserved opening (doorway 1.2 x 0.9m) at its ENE comer leading from the eastern open court to the interior of this room and its adjacent (second) room to the east. The finding of a few MBA and LBA and many Iron Age sherds indicates its use during these periods. Other finds include two bronze pins and some stone implements.

Northwest of this building, part of a double fortification wall has been revealed (visible length 13.5m) in the trenches M12- M13, badly destroyed by the construction of some Islamic tombs.

Immediately to the east of this trench a much larger second room (60 x 3.5m) was revealed in trench O14, similar in construction to that on trench N13. These two rectangular rooms belong to a large building (ca.9.0m long) and communicate with each other with a smaller interior doorway opened at the northern comer of their intermediate wall. Finds include abundant Iron Age pottery and some glass beads. Another well-constructed opening has been observed at the southern wall of this room in trench N14, leading probably to another room or to an open court to the south of it.

Further work in trench M15, to the south of the rectangular two-room building, revealed scanty architectural remains, as a result of the construction of at least six Islamic tombs, while no definite interpretation has been made for the probable use of the rectangular structure, consisting of a series of well-cut stones (forming a step at its north side). Noteworthy is the finding in this trench of a partly preserved tabun-type oven, similar to that found in a previous season in trench 117, on the southern slope of the tell.

Though, during the summer 2007, the link between the cCella walls and the Adyton façade was rebuilt. During the summer 2007, the blocking of the rubbles implemented on the back of the facing blocks of the North Cella wall was deposited and replaced by internal filling stones.

By the autumn 2007, forty blocks of the superior part of the Cella North wall, in a precarious balance, was deposited and replaced. The upper part of the North and West walls were re-pointed again with lime in order to create a shape of pitch allowing the running of the rain waters.

The Restoration of the Cella South Wall, Complementary Excavation of the South Dump and Column

In spite of the recommendations of J.-P.Braun to intervene urgently on the Cella south wall, in a very bad state of preservation, no work of restoration has been done since 2000. He advocated the deposit and the replacing of blocks in precarious balance as well as the repointing of the exterior façade.

Fig.4: Consolidation Works on the Cella South Wall (Ph. G. Provost, IFPO).

By the autumn 2007, thirty facing blocs of the western extremity of the Cella South wall were deposited. During this operation, the accidental fall of 9 internal filling blocks occurred. This allowed to notice that a root has been developed inside the wall and has deported its masonry at least about 15cm to the exterior, on more than 4 courses. Urgent consolidation works of the wall were first started from the crane. During the winter 2007-2008, a significant shoring device was then placed with a scaffolding, in order to allow the deposit of all the weakened part of the wall. (Fig. 4)

In order to manage a safe working area on the surroundings of the south wall, the planned dismantling of the column in place (presenting a batter exceeding 15cm at its top) was achieved urgently in November 2007. This allowed the study of the antic laying technique and the used processes to prevent the punching phenomena. In December 2007, the excavation of dump situated on the temple podium, on the plumb line of the south wall, was conducted to allow the placing of the scaffolding. Achieved by Ch. March and S. Desoutter (Archaeologist at INRAP), these results are currently in study. They allow confirming the obtained results of the 1996-2000 excavation, and revealed the presence of a late child burial and an area of potters' kiln's waste.

This operation was necessary at the North due to the very bad state of preservation of the wall that made its architecture illegible and threatened the public security circulating on the theatre's ramp. Though, the works focused on the 4th last parts of the wall and plan the restoration of its North West angle (Fig.1).

Rehabilitation of the Theatre's Ramp and Partial Excavation of the Children's Necropolis

During the winter 2006-2007, the ramp of the South theatre was reshaped. The pitch of the ramp was regulated in order to prevent the running of the rain waters in the Temenos wall. The whole device limiting this circulation, at the South, was dismantled and replaced because it was directly fixed on the remains of the wall and its aspect harmed significantly the esthetic of the site.

In March 2007, during the installing of this device, 3 burials of small children were discovered. They were excavated by C. Hazenhor (Archaeologist at IFPO) and N. Delhôpital (Anthropologist at IFPO) under the responsibility of Ch. March (Fig.2). The results of this operation, currently under study, allow supposing that the necropolis occupying the hill before the installation of the Sanctuary was perhaps re-used at a later period.

Fig.3: Excavation of the North Building (Ph. S. Desoutter, IFPO).

Rehabilitation of the North Blocks' Park and Complementary Excavation of the North Building

During the excavation of the upper part of the Sanctuary, the blocks were stored on the temporary terraces. Since 2001, no maintenance of these storage spaces was done. Though, since the winter 2006-2007, an urgency operation was first conducted, in order to displace and/or straighten the blocks in a precarious balance. In the spring 2007, a rehabilitation program of 4 areas of storage (North, West, South, and East) was launched, in order to rebuild the terraces and to store the blocks in a logic way, according to the scientific study's results.

At the North, theses works, had allowed to free the space of the building adjoining the external façade of the Temenos wall. This edifice has been partially excavated in 1997 by L. Pontin (Archeologist), under the responsibility of J.-P. Braun. In December 2007, its complementary excavation has been conducted by S. Desoutter (Archaeologist at INRAP) under the responsibility of Ch. March (Fig.3). The results of this operation, currently in study, allow confirming the dating of the 1997 excavation (built in the Hellenistic period, abandoned in Rroman period) and to precise its architectural reconstruction (levels, accesses)

Restoration of the Adyton Wall and the Cella North Wall

Until 2006, the restoration operations on the walls of the Cella allowed to give it visibility again. This work remained to be completed and significant operations of the structures' preservation in place were to be entirely conducted.

the flag stones of the basilica's pavement, part of which is visible above the dump of the aforesaid American works. The vicinity of the basilica to the national road, running just below it, must have played a determining role in stone robbing that was practiced in Jerash after 1934 till the early 1950s. The north colonnade dividing the two mentioned naves was very poorly preserved. Only five pedestals of the original fifteen columns pertaining to the north colonnade of the Roman Via Sacra were preserved in situ. No more than 15 % of the columns and architraves was preserved on the ground. Contrastingly, seven columns with their architraves of the south colonnade were preserved in situ. In transforming the Roman structures into a Christian basilica, four columns at each side of the eastern end of the colonnades were removed to widen the presbyteral area, the pedestals of which were reused to built the chancel walls. Two pairs of bigger granite columns must have defined a sort of transept; fragments of such columns are preserved on both sides of the tunnel of an under-passing street about five meters below the church floor. The granite columns were probably originally part of the South Tetrakionion, where other similar fragments can be still observed.

2. In continuing the excavation in the basilica's southern sector east of the side chapel, a mosaic paved room was revealed, the easternmost end of which had slipped down. The mosaic tesserae had been removed and laid again; a small portion of its original white and brown geometric decorative pattern was preserved and brown tesserae were irregularly distributed within the white ground (consolidation of the mosaic edges was carried out). The discovery could demonstrate a later addition of the side chapel in the building evolution of the church. Furthermore, the continuation of the above mentioned mosaic was discovered, integrally preserved, in a trial trench opened in a large lacuna, 15 cm. below its mosaic flooring. Therefore, a long corridor ran alongside the south nave of the basilica before the construction of the chapel.

3. By moving part of the architectural elements, coming from previous excavations and temporary located in the northern sector of the narthex, it was possible to verify that that area underwent successive building phases. In some lacunae of the stone tiles of the present flooring, the mosaic of a previous pavement having a tress pattern cornice has been found.

4. The area exposed with the last work will allow visitors a considerable extension of the Gerasa's history and city planning. Didactic panels will be installed in the next campaign.

Jarash/Artemis

Project Name: Excavation and Restoration in the Sanctuary of Artemis
Duration: 1st March – 4th April 2007
Sponsor: Centro Ricerche Archeologiche e Scavi di Torino
Director: Roberto Parapetti
Representative: Abdulmajid Mjelli.

This year the excavation campaign in the Sanctuary of Artemis in Jarash resumed the work interrupted in 2005 in the sector of the sanctuary east of the Main Colonnaded Street, i.e. in the complex of the Roman buildings defining the Via Sacra that gives access to the Temple from the Artemis Bridge to the West Propylaeum. It is known that the sanctuary complex of buildings in the above said sector, after the introduction of christianity in the region and the damage due to a number of severe earthquakes affecting the city from the 4th to the 6th century A.D. in particular, was transformed into a Byzantine ecclesiastic settlement, the so called Propylaea Church, also known as the Viaduct Church.

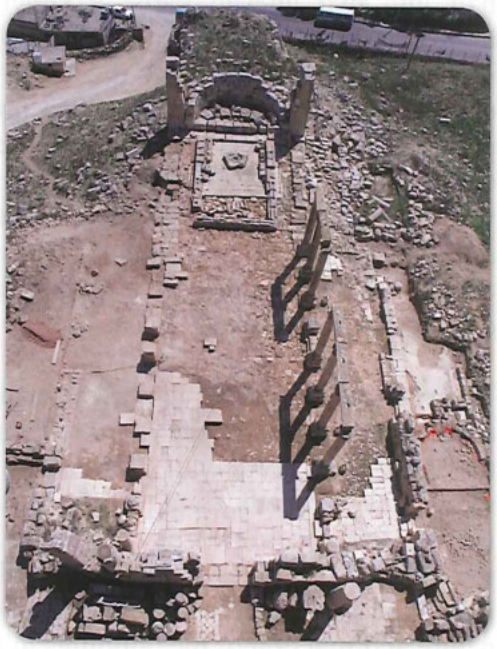

Fig.1: General view of the 8 nave basilica from west

A basilica's forecourt was located in the Trapezium Shaped Plaza of the pagan sanctuary and a three nave basilica was formed by roofing that segment of the Via Sacra, in the colonnaded street up to the East Propylaeum, where an apse was built.

Previous works carried out in the area by the Italian Mission (together with the study and topographical positioning of the fallen and accumulated architectural elements on the ground of both the Roman and the Byzantine overlapped buildings) included the following: excavation of the southern sector of the church's forecourt and narthex (1999-2002); excavation of the southern nave of the basilica and adjacent southern chapel; clearing of the presbyterial area and the northern sector of the atrium excavated in 1929-1934 by the American Expedition in which a well known mosaic flooring of the diaconicon was restored (2005).

Fig.2: Artrium with North and south annex rooms from east

1. In this year's campaign the excavation of the central and northern naves of the basilica were completed. As in the adjacent southern nave the area appeared heavily disturbed by relatively recent manipulations, the last of which should be attributed to the installation and re-installation of the Sound & Light fittings. Other indications of less recent non archaeological operations can be inferred from the absence of the greatest part of

for a central axial transept (nave) in front of the original main mihrab, as evidenced by the higher disposition of the column foundations and the greater space between the column bases. Similarities with the Great Mosque of Damascus are very apparent. Also resolved is the later insertion of two further niches in the qiblat wall and the partial blocking of the original main mihrab. This rather unusual change seems to have resulted from the subdivision of the qiblat hall into two uneven parts: a larger area to the east and a smaller area to the west. A wall was built perpendicular to the qiblat wall to effect this division. The two added mihrab are positioned at equal distance between the original outer walls to the east and west and the dividing wall, indicating that the division of the qiblat hall and the insertion of the new mihrab were related and perhaps simultaneous events. Also possibly dating to this time was the blocking wall construction of the archways between the qiblat hall and the courtyard before it. However, the reasons for these changes are not clear.

Fig.3: View of the shop area, east of the mosque, where the inscribed marble tablets were found.

To the west of the mosque, further investigations were undertaken into the buildings located there and a street that separates the mosque from them. A hard packed yellow clay surface was identified for the street at its north end. At the south end a substantial foundation trench for the west mosque wall was uncovered, indicating that the buildings to the mosque's west predate it. New areas were opened up over these western structures, with important results. A new alley, heading westwards away from the mosque, separates two major building, one of which had arched rooms and evidence for pottery making. Much further work is required here to illuminate the nature and function of the buildings in this area.

Undoubtedly, however, our most exciting find during a season of major discoveries came from the line of shops that lay east of the mosque, butting against it, and which faced out on the old Roman-period cardo. Excavation in 2006 had revealed the back rooms of these shops, each subdivided by low bins (Fig. 3). Five whole vessels of the eighth century CE were found late in the 2006 season, but even more exhilarating was the discovery this season of two marble tablets, reused, with Arabic writing in a charcoal pen (Fig.4). Initial reading of the clearer of the two tablets suggests merchants' records, listing names of customers, perhaps creditors or debtors? These historically important documents reveal not only the sophistication of commerce in the eighth century, but also the common use of Arabic – written in a neat and careful hand – by this time in the market place. Just to reinforce the prominent role of Arabic in the town, an ostracon was found in the northwest corner of the mosque. The text is faint but should be readable in due course.

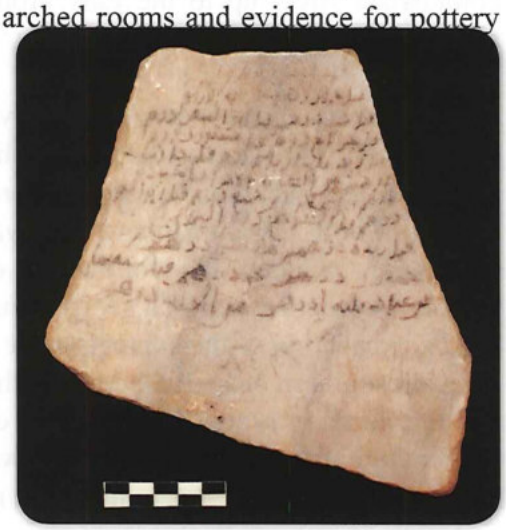

Fig.4: One of the marble tablet inscriptions.

Recommendations

Restoration and presentation of the mosque as a positive visual record of early Islamic settlement at Jarash is essential.

Islamic Jarash

Project name: The Danish–Jordanian Islamic Jarash Project
Duration: 4–30 August 2007
Director: Prof Alan Walmsley
Representative: Musa Melkawi

Historical background

The major archaeological and tourist site of Jarash is renowned for its Roman-period and early Christian archaeological monuments, including huge temples, theatres, open public spaces and many churches, the latter often decorated with brightly-coloured mosaics. After the Islamic expansion into Bilad al-Sham (635–640 CE), social and economic life continued unabated at Jarash, a highlight of which was the construction of a large mosque in the center of the city, as first discovered by this project in 2002.

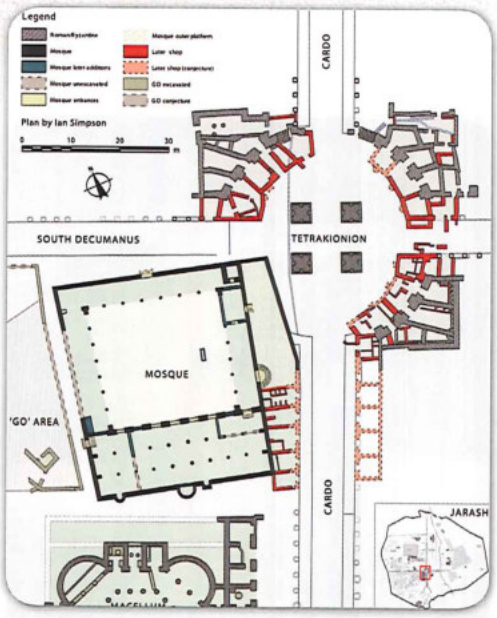

Fig.1: Plan of the Umayyad mosque of Jarash and related structures (Simpson/ Barnes)

Tourism potential

Jarash is a well known tourist site but only recently known for the Islamic periods. To help correct this oversight, the Islamic Jarash Project has commenced a program of excavation and restoration of a number of major Islamic monuments, including a large early Islamic mosque centrally positioned at the southern crossroads of the city (the tetrakionia plaza).

Area explored this season

The Summer 2007 season of the Danish-Jordanian Islamic Jarash Project had as its primary objective the continued excavation and recording of the mosque, the underlying bathhouse, a line of shops flanking it on the east, and adjacent buildings of still uncertain function to the west (figure 1).

Most significant monuments in the area.

In the southwest quadrant of the Tetrakionia plaza stands the main (Friday or Congregational) mosque of Jarash constructed in the Umayyad period (41-132 H/661-750 CE), most probably under Hisham ibn Abd al-Malik (r. 105-125 H/724-43 CE). To the east of the mosque are five shops filling the irregular space between the east wall of the mosque and Roman-period cardo, and to the west is a court and rooms. Predating the mosque was a late Roman-period bathhouse (late third-early fourth century CE), which is also being investigated.

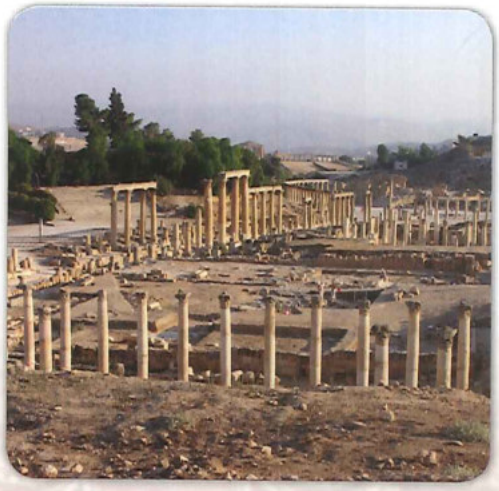

Fig.2: Overview of the excavated area, looking south.

Results

In 2007, the full extent of the mosque was finally exposed, except for the retention of an access point on the west side (Fig. 2). Accordingly, the full length of the qiblat (prayer) hall is now uncovered. Notable is the architectural evidence

- OVADIAH (A.), « Excavations in the Area of the Ancient Synagogue at Gaza (Preliminary Report) », Israel Exploration Journal, 19/4, 1969, p. 193-1989.
- BAR-NATHAN (R.) & MAZOR (G.), « The Bet She'an Excavation Project, 1989-1991, City Center South », ESI, 11, 1993, p. 37-38.
-MARTIN-BUENO (M.) & USCATESCU (A.),
« The Macellum of Gerasa (Jerash, Jordan) : From a Market Place to an Industrial Area », BASOR, 307, 1997, p. 67-88.

Fig.2: Chamber w9 and Chamber w14

Fig.3:Umayyad bronze coins

Jarash /Hippodrome

Project Name: Umayyad Urban Economy in Jarash
Duration: 3-19 April 2007
Sponsor: IFPO Amman
Directors: Fanny Bessard (PhD Fellow), Olivier Callot (CNRS)
Representative: Akram al-Atûm

New excavations in the western chambers of the hippodrome of Jarash W6, W9, W11, W14 and W15 (Fig. 1) carried out in April 2007 uncovered a group of five identical dyers' workshops, having the main characteristics of the dyers' workshops found in nearby Gaza, Baysan and the Macellum of Jarash. They all contained a western workspace, surrounded by large circular vats and rectangular basins, presumably used to clean the fibres and fabrics of greasy deposits or dye resistant pectins, and also an eastern workspace with macerating vats and worktop basins, used to dye (Fig. 2). Since there is no hearth we can assume that the dyes used must have been vat dyes, in particular indigo, traces of which were recovered.

Moreover, according to ceramic and numismatic evidence, the dyers' workshops of the hippodrome of Jarash can be dated to the first half of the 8th century A.D., that is during the Umayyad period. First, three Umayyad bronze coins struck after the reform of the Caliph 'Abd al-Malik b. Marwân in 80 H./696 A.D. were recovered on the paved floor in chambers W11 and W14 of the hippodrome (Fig. 3). Second, three moulded, zoomorphic handle type lamps, of oblong form, were recovered while excavating chambers W6 and W14. They can also be dated to the Umayyad era. Moreover, several fragments of red and dark clay basins, decorated with sinusoidal patterns in white paint, typical of the ceramic works of Umayyad Jarash, are further strong evidence of the Umayyad origins of the workshops. In addition, fragments of large jars, decorated on the top of the body or the rim with typical incisions (wavy or wheat motifs) of Middle-Eastern ceramic of the beginning of the eighth century A. D., are additional criteria testifying to the Umayyad date of the site.
The analysis of the remains of the hippodrome's dyeing workshops, in the light of narrative sources, yields new information about the artisanal techniques used in textiles' dyeing in the East. In addition, the workshops testify to the thriving activity of Jarash after the muslim conquest of the Near-East, which was probably the result of a coordinated effort by local authorities.

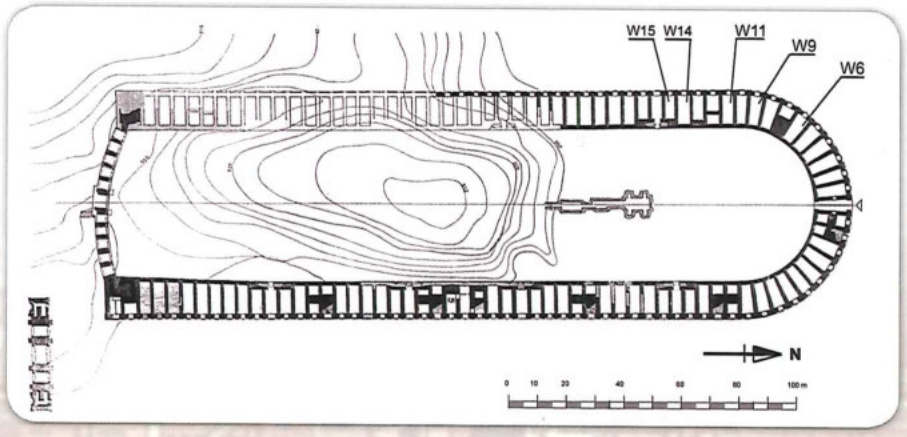

Fig.1: The Hippodrome of Jarash

-Baths and Hammams of Transjordan Colloquium "Balnéorient" Amman May 2008.

It will be presented the paper entitled: **"Umayyad baths at Amman Citadel and Qasr Hallabat (Hammam As-Sarrah complex)".**

-International Congress (by invitation). *"La Trasgiordania nei secoli XII-XIII e le 'frontiere' del Mediterraneo Medievale",* to be hold in November 2008 in Florence Italy.

It wil be presented the paper entitled:

- "The fate of the Limes Arabicus under the Ghassanids

"

-6th International Conference on Science and Technology in Archaeology and Conservation Rome December 2008.

It will be presented the paper entitled: **"Analysis and Documentation Project on Building Techniques and Architectural Typologies in the Transitional Period between Late-Antique and Early Islamic Period in Jordan. Results of the first campaigns".**

4- Hammam As-Sarah

In the present campaign, it has been continued the analysis of the vaulting system, and restoration hypothesis, prior to the dismantlement of previous restorations and the execution of the new interventions. Accurate plans with tachymetric support have been designed.

It is noteworthy the discovery of the vase of a fountain, as well as the claypipes driving water from the hydraulic system that serves the bath as well. **This would be the oldest known Islamic garden preserved.**

The results of the ongoing research and restoration project will be presented in the ***International Colloquium Balneia, Thermes et Hammams*** that will be held next May at Amman.

BALNEIA, THERMES ET HAMMAMS is a Project of Collective Research put forward by the Institut *Française du Proche-Orient* (IFPO) and in which the Director participates.

5- Qasr al Hallabat. Analysis of the structure and its decoration patterns in Ghassanid Period.

The Results of this research are presented in the attached article to be published in the Proceedings of the *10th International Conference on the History and Arcaheology of Jordan,* held at Washington in May 2007. This article gathers not only the actual presentation but also the further research conducted on this topic during this campaign with noteworthy hypothesis and conclusions. The article is entitled: ***"Coenobium, Palatium and Hira: The Ghassanid Complex at Hallabat".***

Participation in Courses, Conferences & Congresses

PARTICIPATION IN CONFERENCES (DURING PAST YEAR)

-10th International Conference on the History and Arcaheology of Jordan, held at Washington in May 2007.

It was presented the paper entitled:

-"Coenobium, Palatium & Hira: The Ghassanid Complex at Hallabat".

-5th International Conference on Science and Technology in Archaeology and Conservation July 2007 Baeza

It was presented the paper entitled:

-"Analysis and Anastylosis of two Umayyad mosques: the cases of Amman Citadel & Qasr Hallabat"

-Curso Internacional sobre estereotomía CEU-UPM Madril July 2007

FUTURE PARTICIPATION

-6th International Congress on the Archaeology of the Ancient Near East (6ICAANE) **-Islamic Archaeology Session**. Rome May 2008.

It will be presented the paper entitled:

- "Kastra, Coenobium, Qasr: The shifting into monastic & palatine complexes of Late Antique military structures in the Levant".

Fig.4: Um al-Jimal: East Elevation

2- Umm al-Jimal (6thC AD civil and representative structures):

-"Barracks" (internal section),
-House XVIII (internal courtyard),
-West Church
-Praetorium.
In this campaign orthophotographic recording was continued in the "Barracks" complex, and initiated in the House XVIII, the West Church and the Pretorium. **Unfortunately a failure in an external Hard-Disk storage unit has provoked the loss of significant amounts of elaborated material and raw data.** This has been an important setback in terms of work, time and money that would have to be regained in next campaigns.

It has been possible to elaborate the elevations of the courtyard of the House XVIII that are presented attached.

3- Qastal. Umayyad Qasr. Gateway Complex and Upper Domed Hall. Reconstruction Hypothesis.
Here are presented the first results of a research conducted on this heavily damaged building that nonetheless still deserve in-depth research. This research has just begun, being presented here just the first hypothesis that will be used in the coming research.

- **Longitudinal and Transversal sections,**
- **Axonometric sections**
- **Composed images of present condition and hypothetical reconstruction**

These hypotheses represent a complete review of the existing ones put forward by bthe French researchers Carlier and Morin that excavated and analysed the complex in the decade of 1980's, twenty years ago. Our research imply a review of the reconstruction of the "entrance block", a review of its phasing (it has been clearly identified two phases with clearly different building techniques), and of the general setting of the complex and of each building from it. This implies as well a review of its historical sequence of reuse, taking into account the written sources that mention the existence of a Ghassanid complex (and probably an earlier Roman one on which the Ghassanid one was built, that in its turn was refurbished, once or twice in Umayyad period).
Thus this Roman-Ghassanid-and-Umayyad complex is another important case-study for our research of the transitional period between Late Antique and Early Islamic periods.

in the South and East sides of the new fort (in the last case a double tower flanking the entrance).
Third Phase: Abandonment of the building as a military structure manned by a garrison of *limitanei*, and reuse by a monastic community that would reuse just part of it and would built a chapel for its cult needs. We ignore what use was given to the rest of the fort but can be hypothesized the establishment of a *mashlah/hira* (fort/camp) of Ghassanid federate troops on a temporal basis.
Fourth Phase: Abandonment of the monastery and the rest of the complex, and use in Umayyad period. It is not clear yet with which purpose could have been used, as the lime kilns and the basins found could correspond to an industrial building intended as final goal or as part of an unfinished process of refurbishment with the establishment of those lime kilns and other infrastructures as a temporary installation for its final refurbishment aimed to a different final destination.
These conclusions shows the existence of a recurrent pattern of transformation of forts from the 3rd throughout the 7th C AD: Thus Severian period square forts without towers were transformed into *quadriburgii* in Diocletian period. These would be eventually abandoned with the dismissal of the *limitanei* troops by Justinian and the change of defence strategy of the limes, when the Ghassanids were entrusted with that task. These Arab Christian *foederati* (not Roman citizens –*cives*- as the dismissed *limitanei*), implementing their policy of patronizing Monophysite monasticism (as part of their own agenda) would transform most of those abandoned forts into monasteries and palatial venues according to their new role as Phylarch and kings of the federate Arabs and their strategies and tactics of defence (not those of a frontier-guarding garrisoned army but those of a mobile one, that require logistic support points but not forts to garrison troops on a permanent basis).
These phases would correspond to three main phases of the *Limes Arabicus* and its final collapse:
The first one would correspond to the incorporation of *Oriens* to the Roman Empire in the first centuries AD. This phase witnessed the construction of the Via Nova Trajana, the Via Diocletiana, and the first related military structures (square forts, watchtowers, etc) of the *limes Arabicus* to protect them from the threat posed by the Persian army and the raids of the nomads pastoralists.
The second phase corresponds to the overhaul of this eastern *limes* and its defensive system by Diocletian, with the construction of *quadriburgii*, intended mainly to host auxiliary cavalry units, and the refurbishment and enlargement of other structures already existing from the first phase.
The third one would correspond to period between the overhaul of the defences by Justinian till the demise of the limes under Heraclius. In this third phase, the Ghassanids were entrusted with the task of the defence of the *limes Arabicus* (to which corresponds this area and this fort), being bestowed on their leaders the titles of *"Archiphylarch"* and *"Basileus"*, of all the federate Arabs. During this phase these forts changed drastically their use losing their previous military value, being transformed into monasteries and watch-posts to take care of strategic points nearby like crossroads and water sources.

Conclusions:
The fact that we have now two structures Hallabat and Dayr al-Kahif that underwent almost the same physical transformations and change of use in the same period of time, allow us to hypothesize a recurrent pattern in these transformations occurred from Late-Antique through Early Islamic period. This transformation pattern identified, will guide our research in the next steps trying to identify new and similar examples.

In the following campaigns will be carried out the ortho-fotographic recording and the detailed stratigraphic analysis of its walls, and will be conducted further archaeological soundings to further confirm our hypothesis.

This South wall is the most damaged of the structure, especially in its eastern end (and corner), where the main (already mentioned) irregularities in plan exist. In this area the Princeton mission found seven blocks with a Latin inscription (lost). According to their report these would be reused elements[2] , but unfortunately the exact location and the stratigraphic relationship with the rest of the surrounding walls are unknown. This inscription would be dated between AD 367-375. It makes reference to certain Maximianus *Comes and Dux* whose name is mentioned on two inscriptions from nearby areas: firstly in a military inscription from Umm al-Jimal (dated AD368); and secondly in an inscription with a dedication to the same Emperors from Dhiban (dated AD364/367 -see Sartre 1982, p.105 n.72).

Again in the place where it should have been expected an intermediate tower in this South wall, the only apparent thing is a vertical joint indicating different building activities for both stretches of this wall. Behind it a modern wall (not seen so well defined in Poidebard's picture) runs towards N-NW. The same difference in technique noticed in the East wall can be found here, with a rougher technique in the western stretch and the coeval SW tower. In this area, and near the tower a postern opened in the wall gives access to a cistern placed extramuros. This cistern was apparently walled and linked to the perimeter wall.

Fig.3: Dayr al-Kahif: The North facade

The West façade is very regular in plan (as the North one) with corner and intermediate towers, although present important reconstructions. These affect to the southern stretch of the wall and to the W façade of the intermediate tower. Actually the southern stretch of this E. wall between the corner and intermediate tower, has been almost completely rebuilt: a new entrance was opened in this wall and a corridor was created between two major rooms supported both of them by three diaphragm arches each. This intervention is not seen in Poidebard picture that shows also the western façade of the intermediate West tower collapsed. Villagers have informed us that these elements were rebuilt in the 1950's decade of past century when the site was re-occupied again, being used by the Jordanian police till some decades ago.

The North façade is the best preserved of all, presenting corner and intermediate towers as well. A breach in its western stretch defines another (modern) access to the interior. It is possible (according to parallel samples) that in correspondence to that breach existed originally a postern (it apparently exists already in Poidebard's picture).

The towers project more towards the interior of the structure that towards the exterior. This was devised (like in many other *quadriburgii*) to place in between them the rows of rooms for the troops (*contubernia*) and the stables (this secondary works could be undertaken later once the main

2 Salvis ac victoribus d(ominis) n(ostris)Valentiniano et Valente et Gratiano aeternis triunfatoribus senper Augustis hunc castellu(m) [i]n [...s]ede posit[um] atque [ampli]a[t]um disposi[t]ione Maximini v(iri) c(larissimi) com(itis) et ducis haec monumenta <te>testa[n]tur, insistentibus Valen[t]iniano prae[fect]o [coh](ortis) et So[z]omeno et Cointo scriniarii[s].
For the Health and Victories of Our Lords Valentinian and Valens and Gratian, Eternal Victors, Ever Augusti, this Castellum [...] under the care of the Most Illustrious Maximinus, Comes and Dux, these records are set up, through the agency of Valentinianus, Prefect of the Cohort, and the Record-Keepers Sozomen and Quintus

Its plan is almost square (60x60m) and presents corner towers and intermediate ones (but just in its North and West sides). The SE corner of the complex presents some noteworthy irregularities that have attracted the attention of researchers in the past, but that had not been fully clarified yet. These, together with other features identified during our survey, have triggered our own research aimed to clarify its origin and evolution. For this purpose a tachymetric survey was carried out and a detailed plan produced.

The entrance is located in the middle of its Eastern side. This main door has not flanking towers as it would have been expected when compared with similar contemporary *quadriburgii* from *Tetrarchic* period, like those from Azraq (79x72m), Khirbat As-Samra (60x65m), Umm al Jimal (irregular plan 95x112m), upper Muhattat al-Hajj (50x50m aprox.), and Bshir (irregular plan 57x54m - although without intermediate towers in the other walls). Only the *quadriburgii* of smaller size like Hallabat (38x38m), Mezad Tamar (38x38m), Thuraiya (37,5x34,5m), Quwayra (32,5x31,5m) and Bir Madhkhur (32x34m) do not have flanking towers at the entrance[1].

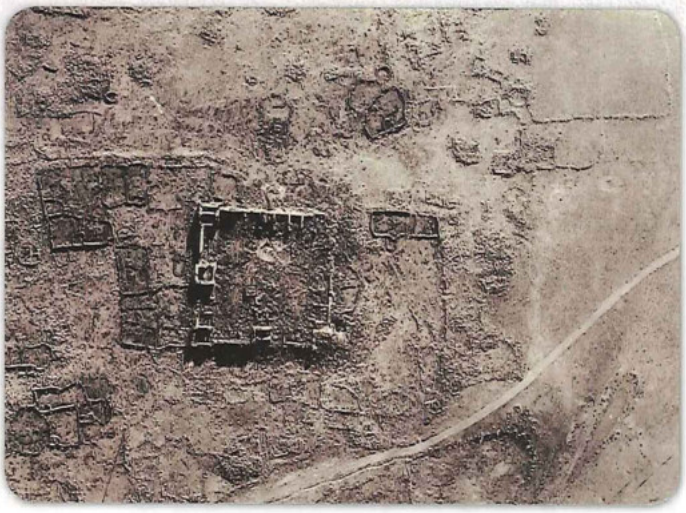

Fig.1: Aerial photo: Dayr al-Kahif Roman Fort

The East wall presents also markedly different characteristics to both sides of the entrance door (i.e. in its N and S. stretches). The southern stretch of wall is built with better squared ashlar masonry set with tight, straight and very accurate joints. Some of these ashlars are still bossed and present "mason marks" . This kind of masonry contrasts with the rough one found in the northern stretch of this same E wall. This rougher technique is identical to the one found in the towers and in the rest of the perimeter walls built in between these towers in the Northern and Western façades. Special attention deserve the traces of a blocked door can be seen exactly in the middle of this southern stretch of the East wall, sharing the same accurate technique in its construction as the rest of its corresponding stretch.

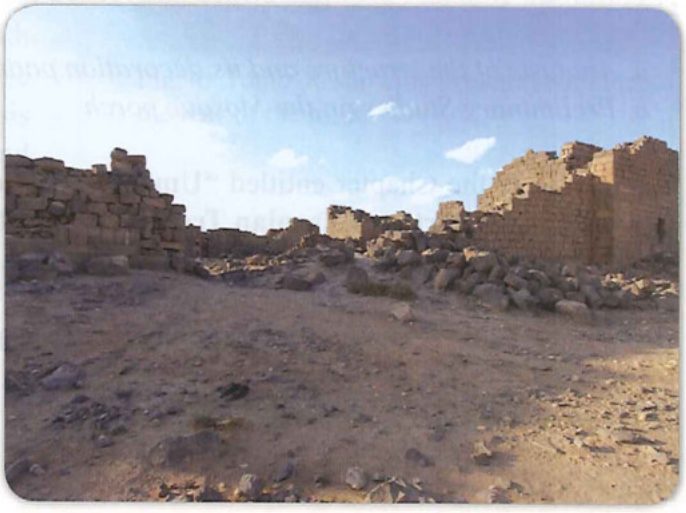

Fig.2: Dayr al Kahif: East wall

Although badly damaged and rebuilt with a crude modern "tower" (most probably by the Druze), the SE corner presents some remarkable features that have determined our research and conclusions: in the place where a proper square hollow tower should have been found, it was identified a second wall doubling and encasing the original corner (defining a sort of "fake corner tower", as apparently there was no such tower originally in that point). It is clear that the inner and older corner walls were aligned with the southern stretch of the Eastern wall (and with the eastern stretch of the South wall) with which it shares the same accurate technique.

1 The smallest ones of the series, those of Upper Zohar and En Boqeq, both less of 20m square, do not have even a corridor entrance room behind the main entrance door.

Wadi Natfa

Project Name: Bioarchaeology of North Jordan
Duration: 27 June – 30 July 2007
Sponsors: University of Arkansas and Yarmouk University
Directors: J. C. Rose and M. Y. El-Najjar
Representative: Abd Al-Roef Tebeishat

This was the second season at Wadi Natfa and the 13th season of the joint Bioarchaeology of North Jordan project. We continued from last year to search for and excavate tombs along the eastern escarpment of the Wadi Natfa which is located just to the southwest of Irbid City between 620 and 695 meters above sea level. The research goals for the 2007 season were 1) to locate and excavate single person horizontal shaft tombs and 2) ascertain the dating of this tomb type and 3) reconstruct the burial program for the people buried in these tombs.

A section of the east wadi slope (75m long) beginning at the edge of the farm road and progressing uphill for approximately 50 meters (between 647 and 660 meters above sea level) was explored. Fig. 1 shows the road edge in the foreground and the first row of tombs with all but three of the tombs excavated. Three rows of tombs were discovered and 32 tombs were excavated. Thirty horizontal shaft tombs whose burial chamber is approximately the same width as the entrance were excavated. The burial chambers averaged 177 cm in length, 76 cm in width, and 99 cm in height. Fig. 2 is the final photograph of tomb 40 which is a typical horizontal shaft tomb. The two robbed-out horizontal chamber tombs averaged 316 by 296 cm in size. The position and condition of the skeletons and personal objects indicate that at least 9 of these tombs had never been robbed. Eight tombs produced complete personal objects and 7 tombs had completely undisturbed skeletal remains. Fig. 3 shows the poorly preserved yet complete skeleton in Tomb 40 with a small copper alloy bell up-side down just above the upper right corner of the label. Burial position is known for 9 tombs: 5 supine extended with heads to the rear of the chamber, 2 on their side with heads to the rear, and 2 extended with their heads to the door (i.e., Fig. 4, Tomb 40). Four tombs

Fig. 1: The road edge is in the foreground above which is the first row of tombs with all but three of the tombs excavated.

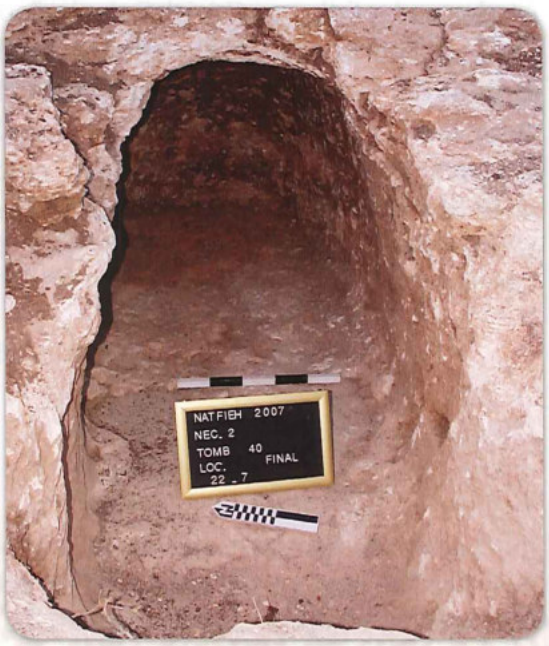

Fig. 2: Tomb 40 final photograph, a typical horizontal shaft tomb.

Al'al-west:
five 30-40 m deep shafts, tunnel with writings

Kharja:
some 50 m deep shafts

`Ayn Khurayba:
25 shafts, tunnel with writings, Qanat

`Ayn Sall:
modern steps to a 1,9 km long race tunnel

`Ayn Quwayliba:
11 shafts, valley-crossing, bridge-ruins, 1st diversion tunnel to Abila

Abila:
four 70 m deep shafts, 2nd diversion tunnel to Abila with 10 shafts

Hibras:
some construction shafts, diversion tunnel from a spring

Hartha:
some construction shafts

Kufur Sum:
some construction shafts

`Ayn Turab:
crossing the older aqueduct Turab-Gadara (Qanat Turab)

Wadi Hamra:
more than 70 shafts

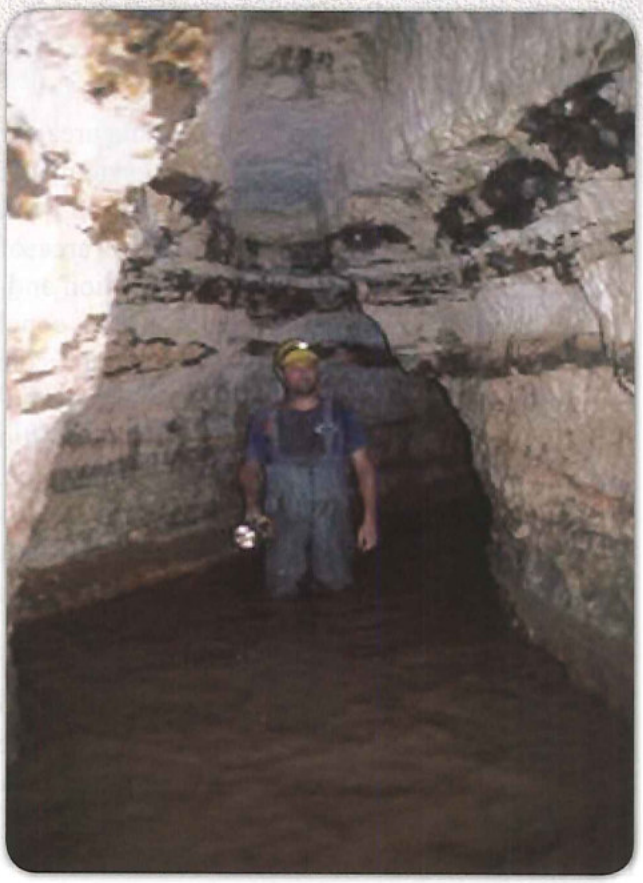

Fig.3: Tunnel near Al'al with, about 40 m below surface

During the excavation in 2007, the team dug several trenches in selected areas to provide further clarification of the stratigraphy of the sites, in particular the developments beneath temple II. Here we could clarify a domestic structure from the Late Hellenistic period (Fig. 2). This result is very important for the question of previous buildings (settlement structures) outside of the city wall and opposite the main sanctuary.

There are still questions concerning the water supply to the North Theatre and its connection to the tunnel system under the settlement on the hilltop of Gadara. A water basin for a fountain was located under the stage of the North Theatre. The water came from the lower tunnel system. At one point in the tunnel, called the first tunnel crossing, is the beginning of the pressure pipe.

Fig.2: View from the north. Trench S15. Hellenistic developments beneath temple II

The system of water support along the East- West-Axis

We continued the 'water survey' started in 2006. In 2007 it had a special focus on the system of water support and drainage in the in the western city expansion in particular on the East-West-Axis (Fig. 3).

Different elements of the water support were found parallel to the East-West-Axis, among other things a big basalt pipe near the Nymphäum, which has an inside diameter from 40 cm (Fig. 4). The pipe could be documented for a length of about 80 m. A lead pipe was found in a length of 30 m near the so-called exedra building. This pipe has an inside diameter from 10 cm. In the area of the Tiberias Gate many clay pipes were recorded.

Fig.3: View to the west a long the East-West-Axis

The finds

The site produced pottery fragments in great quantities. In the early Roman contexts (construction trench of the North Theatre) a significant predominance of buff storage jars was accompanied by small amounts of red kitchen ware and imported wine amphorae from Rhodes. There is no doubt about the local origin of the kitchen and storage vessels. Fine ware (Eastern Sigillata A and Hellenistic colour coated wares) is not well represented. A total of 4 coins were recovered. The coins are poorly conserved and not identifiable. The numerous glass fragments are generally not well preserved. Early Roman bowls made of greenish glass are common. Pieces of opus sectile of white marble or reddish sandstone dominate in the theatre. Cattle bones are predominant in all parts of the site. Sheep/goat bones are particularly well represented.

Fig.4: Elements of the basalt pipe, parallel to the East-West-Axis

Gadara/Umm Qays

Project Name:Archaeological and Architectural Studies on the History of Gadara "Urban development and cultural history of the ancient city"
Duration: August 25 to September 21, 2007
Sponsors: The 'German Gadara Project 2007' 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 'Deutsche Wasserhistorische Gesellschaft'.
Director(s): Claudia Bührig and Günther Schauerte
Representative: Adnan Naqrash

Gadara/Umm Qays[1]

The Hellenistic-Roman city of Gadara, the modern town of Umm Qays, is situated in northwest Jordan. The 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.

In 2007 the Orient Department of the German Archaeological Institute carried out a season of excavation and research on the 'eastern city area' including the North Theatre with an amphitheatre and the Temple II in the north (Fig.1).

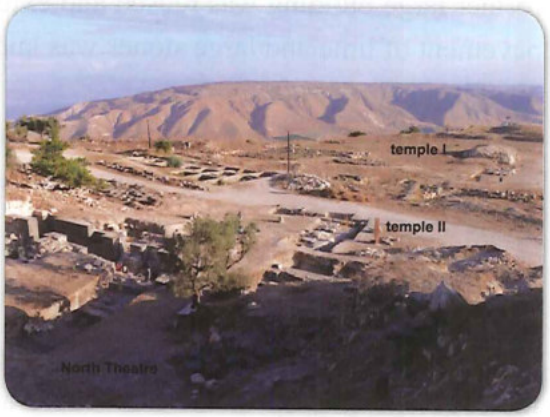

Fig.1: View from south east to the eastern city area with the North Theatre, temple I and II

'Eastern city area' with the North theatre

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, the so-called Abila-Gate, in the city fortifications in the east (Fig. 1).

At this side of the city the North Theatre huddles against the slope of the settlement hill. The North Theatre, which can be dated in the Early Imperial Period, is orientated to the northeast preliminary terrain terrace with the ancient Hellenistic main sanctuary I.

The first five campaigns have developed a picture of the chronological order of functional and structural changes on the eastern city entrance (Fig. 1). Because of their perfect axial alignment and their spatial proximity, the North Theatre and the podium temple II are to be seen in close formal relation, although their connection on the level of usage and the question of typological inspiration have yet to be determined. The North Theatre itself still poses questions concerning the water supply and the replacement (amphitheatre) during late antiquity / the Late Byzantine period.

The main task of this campaign was to clarify the architectural situation in the orchestra of the North Theatre and in particular in front (north side) of the scaene building. We also intended to clarify the construction of the podium temple II and Hellenistic structure beneath – outside, in the north – and their bonding with the North Theatre (Fig. 1). We therefore continued the excavation between the scaene building and the so called niche wall on the north side of the scaene frons and also at the south west angle between podium temple II and the niche wall in front of the scaene building.

1 We would like to thank cordially Director General his Excellency Dr. Fawwaz al-Khraysheh, the Inspector at Umm Qeis Eimad Obeidad, the engineer Ali Aysi and the local representative Adnan Naqrash of the Jordanian Department of Antiquities for their support.

covers an area of 400 m². A large building complex of courtyards and rooms could be observed. This was founded in the Roman period. It was reused and extended several times during the Roman-Byzantine period. After its destruction, rooms were set inside the older wall remains with a completely different orientation. They can also be dated to the Roman-Byzantine period. In the Umayyad period, the rooms were filled up with debris and the former large building was reused and extended. A pavement of lime and large stones was laid on this level inside the courtyards.
The most interesting finds from this area are some oil lamps, a half complete glass flask and two nicely shaped ivory tools.

The intensive surveys on the tall made it clear that there is a large building (Area III) situated on the southern outcrop of the tall. There are walls of dressed stone visible and a large cistern of 11 m x 6 m x 6.5 m is known. After documentation with photographs from a balloon and from ground level, we started to remove the stones, which had been displaced in the centuries after its destruction. Based on the masonry and the pottery on the surface, the building can be dated to the Roman period with phases of re-use in the Roman-Byzantine and the late Islamic period.

Fig.3: Iron Age I house.

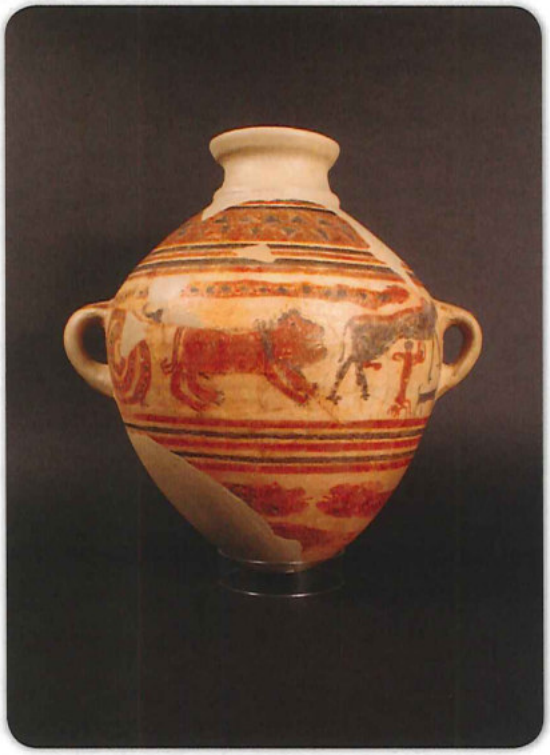

Fig.4: Figurative painted jar found in 2006. In 2007, the missing sherds were found in the next square to the east.

Tall Zar`a

Project Name: Gadara Region Project – Excavation at Tall Zar'a
Duration: March 4 – April 10, 2007
Sponsor: Biblical Archaeological Institute, Wuppertal and German Protestant Institute of Archaeology
Director: Prof. Dr. Dieter Vieweger, Dr. Jutta Häser
Representative: Salameh Fayyad

The "Gadara Region Project" was initiated by Prof. Vieweger in 2001 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 promising 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 excavation started in 2003.

Fig.1: Overview of Tall Zar'a.

Area I on the north-western slope of the tall was extended to the north and to the south. The deepest trench was excavated to a depth of 4.5 m. The excavation continued in 15 of the already opened squares. All in all the excavation now covers an area of 950 m² in Area I.
In Area I, we explored the stratigraphy of the tall. Up to now, we have exposed an Umayyad level (single houses), a densely populated Roman-Byzantine settlement, installations of Hellenistic housing activities, two Iron-Age II fortified cities, an Iron Age I open settlement, and at least two strongly fortified Late Bronze Age cities.
Only 4.5 m of the estimated 12 m height of cultural layers have been explored so far. The test soundings on the slope show some more Late and Middle Bronze Age layers and at least one Early Bronze Age settlement fortified by a huge city wall.

Fig.2: Cylinder Seal of Mitanni glyptic found 2006. 22 more cylinder seals of this style were found in 2007.

In 2007, the excavation focused on a remarkable large, carefully built and well preserved, Iron Age I house in the south of Area I. Its character seems similar to the Late Bronze Age Canaanite courtyard houses. Another aim was the exploration of the Late Bronze Age city of the 13th century B.C. A casemate wall, the southern gate, a tower with a sanctuary and some representative house structures were investigated. 24 cylinder seals (22 of them in one house-context), a bronze pendant and many extraordinary finds underline the importance of the Late Bronze Age city of the 13th century B.C.
Area II in the north of the tall was extended to the east, west and north. The whole excavation there

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, made this publication possible.

- Stephen J. Bourke : Pella
- Steven Collins : Tall al Hamam
- Jonathan N. Tubb : Tall as Sa`idiyya
- Bett Brenk : Jarash Cathedral
- O. Callot : Jarash
- David Graf : Petra
- Guido Vannini : ash Shawbak
- Maria Alitra : Petra
- Bulant Arikan : Wadi al Hasa
- Adnan al Shiab : Petra

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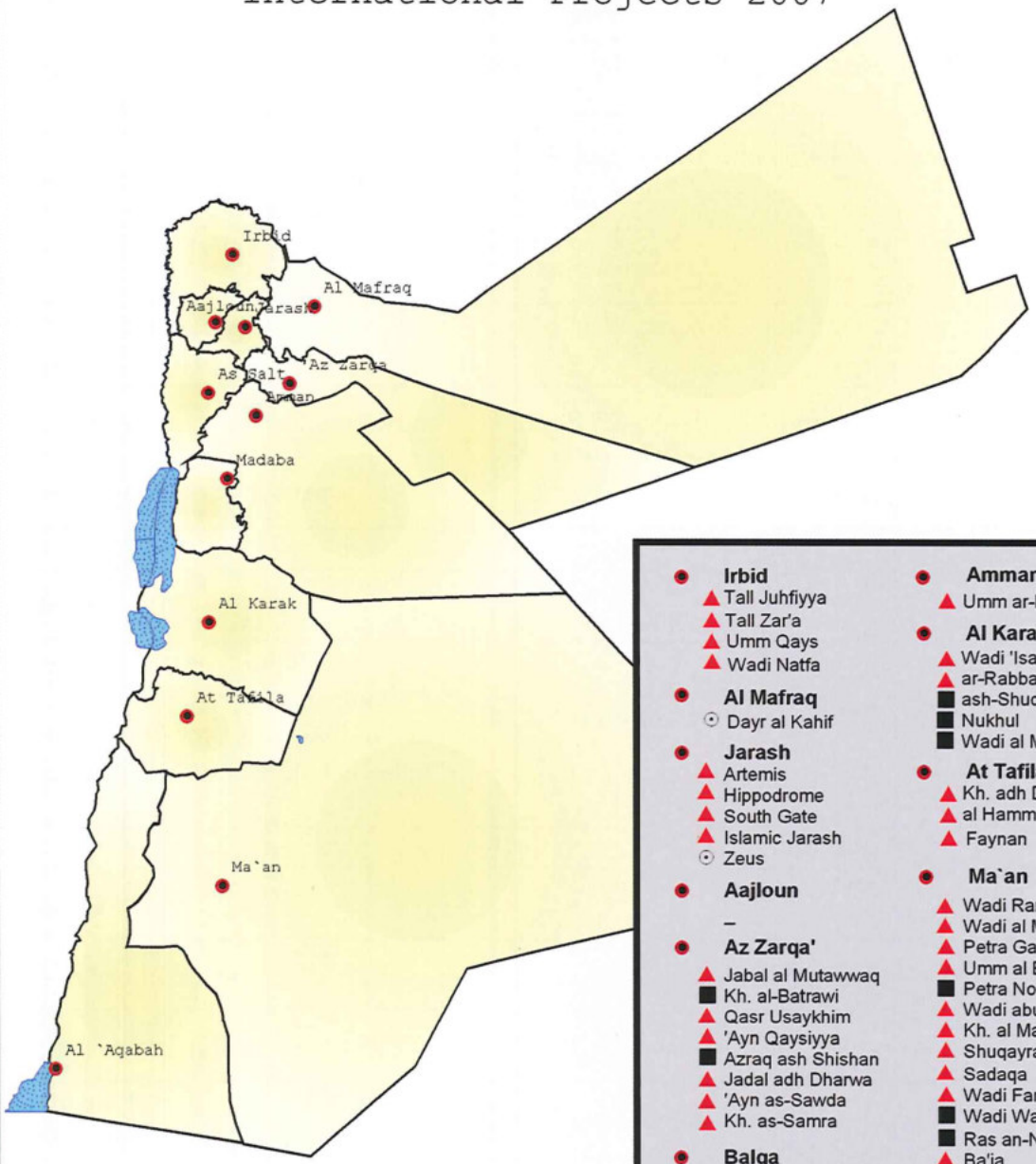
International Projects 2007



By: Fattoh Al-Banna

Restoration
Survey
Excavation

Irbid
- Tall Juhfiyya
- Tall Zar'a
- Umm Qays
- Wadi Natfa

Al Mafraq
- Dayr al Kahif

Jarash
- Artemis
- Hippodrome
- South Gate
- Islamic Jarash
- Zeus

Aajloun
- –

Az Zarqa'
- Jabal al Mutawwaq
- Kh. al-Batrawi
- Qasr Usaykhim
- 'Ayn Qaysiyya
- Azraq ash Shishan
- Jadal adh Dharwa
- 'Ayn as-Sawda
- Kh. as-Samra

Balqa
- Tulul adh Dhahab
- Umm Hadar
- Tall Dayr 'Alla
- Tall al Kafrayn

Madaba
- Madaba
- Tall Madaba
- Tall Hisban
- Kh. al Mudayna
- Tall Jalul
- Kh. Iskandar
- Tall Ma'in

Amman
- Umm ar-Rasas

Al Karak
- Wadi 'Isal
- ar-Rabba
- ash-Shuqayfiyyat
- Nukhul
- Wadi al Mujib

At Tafila
- Kh. adh Dharih
- al Hamma
- Faynan

Ma`an
- Wadi Ramm
- Wadi al Mataha
- Petra Garden
- Umm al Biyara
- Petra North Ridge
- Wadi abu Tulayha
- Kh. al Malayqta
- Shuqayra
- Sadaqa
- Wadi Farasa
- Wadi Waghit
- Ras an-Naqab
- Ba'ja
- Jabal Harun
- Basta
- Jabal Numayr
- Wadi as Sadda
- Ath Thulaythwat
- Garandal
- Trayf al-Maragh
- Qasr Tilah

Al `Aqabah
- 'Aqaba Castle
- Bir Madhkur

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