

THE CATALAN INSTITUTE OF CLASSICAL ARCHAEOLOGY (ICAC): A RESEARCH AND ADVANCED TRAINING CENTRE

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The Institut Català d'Arqueologia Clàssica (Catalan Institute of Classical Archaeology, or ICAC) is a public consortium that was created by the Department of Universities, Research and the Information Society of the Generalitat of Catalonia and by the Universitat Rovira i Virgili. Its headquarters, which were inaugurated in September 2003, are located in the historic heart of the city of Tarragona. The aim of the ICAC is to implement research and provide advanced training in the field of classical archaeology. Its research efforts are largely centred on studies of Greek and Roman archaeological remains, and the corresponding results are analysed in the context of other ancient world studies, such as classical languages, numismatics, epigraphy, art history, and Greek and Roman thought. Despite its few years in existence, the ICAC has made a promising start; it has already undertaken a number of research programmes and projects and also runs an officially recognised inter-university post-graduate programme. This article describes some of the more important aspects of the organisation and activities of the ICAC, and provides some examples of ICAC research projects currently underway.

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1. The ICAC: a classical archaeology research centre

The Institut Català d'Arqueologia Clàssica (Catalan Institute of Classical Archaeology, or ICAC) is a research centre created by a formal agreement of the Catalan Autonomous Government (Generalitat de Catalunya) of 2 May 2000. It is included in the Third Research Plan for Catalonia (2001-2004). Its mission is to implement research and provide advanced training in classical archaeology. In the broadest sense, classical archaeology is understood in both geographical terms (the Mediterranean and its European context, North Africa and the Near East—the cradle of classical culture) and historical terms (the Greek and Roman civilisations and the peoples with which the Greeks and Romans had dealings, for example, the Iberians).

The ICAC is a consortium participated in by the Department of Innovation, Universities and Enterprise (DIUE) of government of Catalonia (Generalitat), and the Rovira i Virgili University (URV). The Inter-University Council of Catalonia is also represented on the ICAC Governing Board. The

programme-contract signed with the Generalitat and the definition of a policy provided the input to the ICAC's First Four-Year Action Plan (2002-2006).

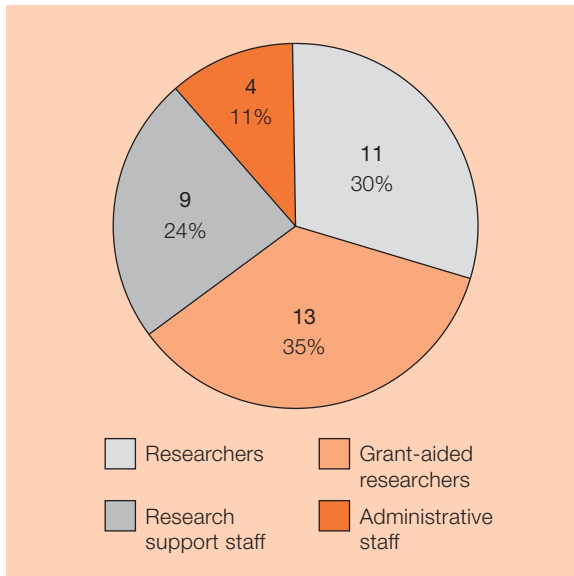
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In these early years of functioning, the ICAC has been gradually recruiting researchers and research support staff so as to be able to comply with the provisions of its four-year plan. One of its main activities in this area has been the recruitment of

¹ ICAC has received funding from, for example, the Spanish Ministry of Educación and Science, the Government of Andorra, a number of town councils, and from private enterprises such as Repsol YPF and ACESA.

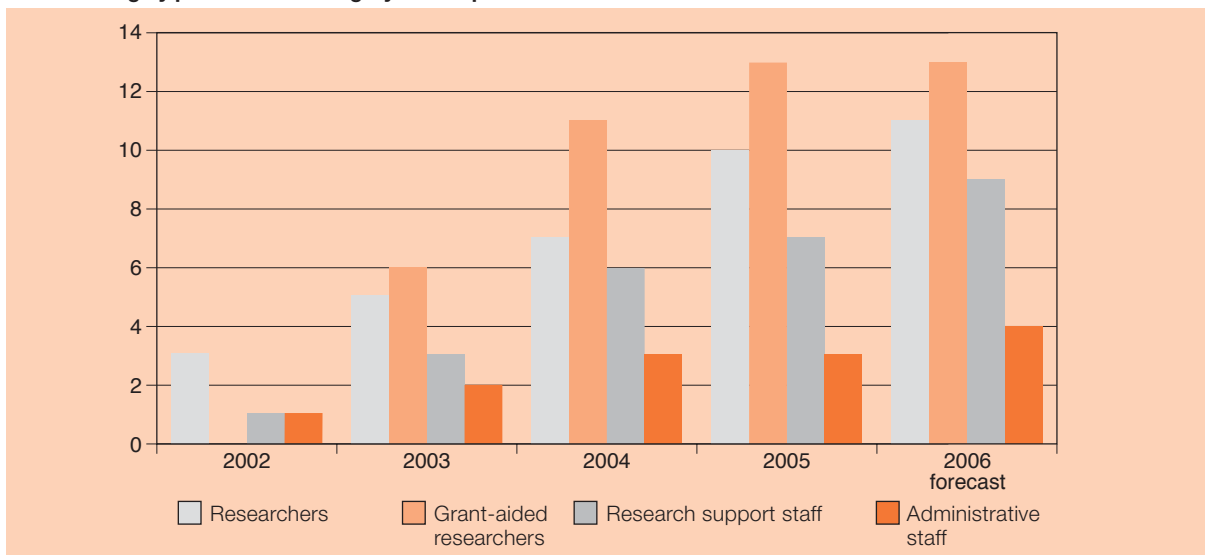
Graphic 1
ICAC staff by professional category
(forecast for 2006)



pre-doctoral researchers. A Research Initiation Programme (*Beques d'iniciació a la recerca*, or BIR) was launched in cooperation with a number of archaeology organisations, which by now incorporates a total of 15 researchers. The ICAC has also recruited grant-aided pre-doctoral researchers under the Generalitat Programme of pre-doctoral grants for training of researchers, FI. Graphics 1 and 2 summarise ICAC staffing data, and Figure 1 illustrates the organigram of the ICAC.

The ICAC has signed a total of 42 cooperation agreements (Graphic 3). Agreements signed with universities aim to implement scientific cooperation and advanced training activities; those signed with archaeology organisations are aimed at participation in the BIR programme; and agreements entered into with a number of town councils and other public and private bodies refer to specific research projects.

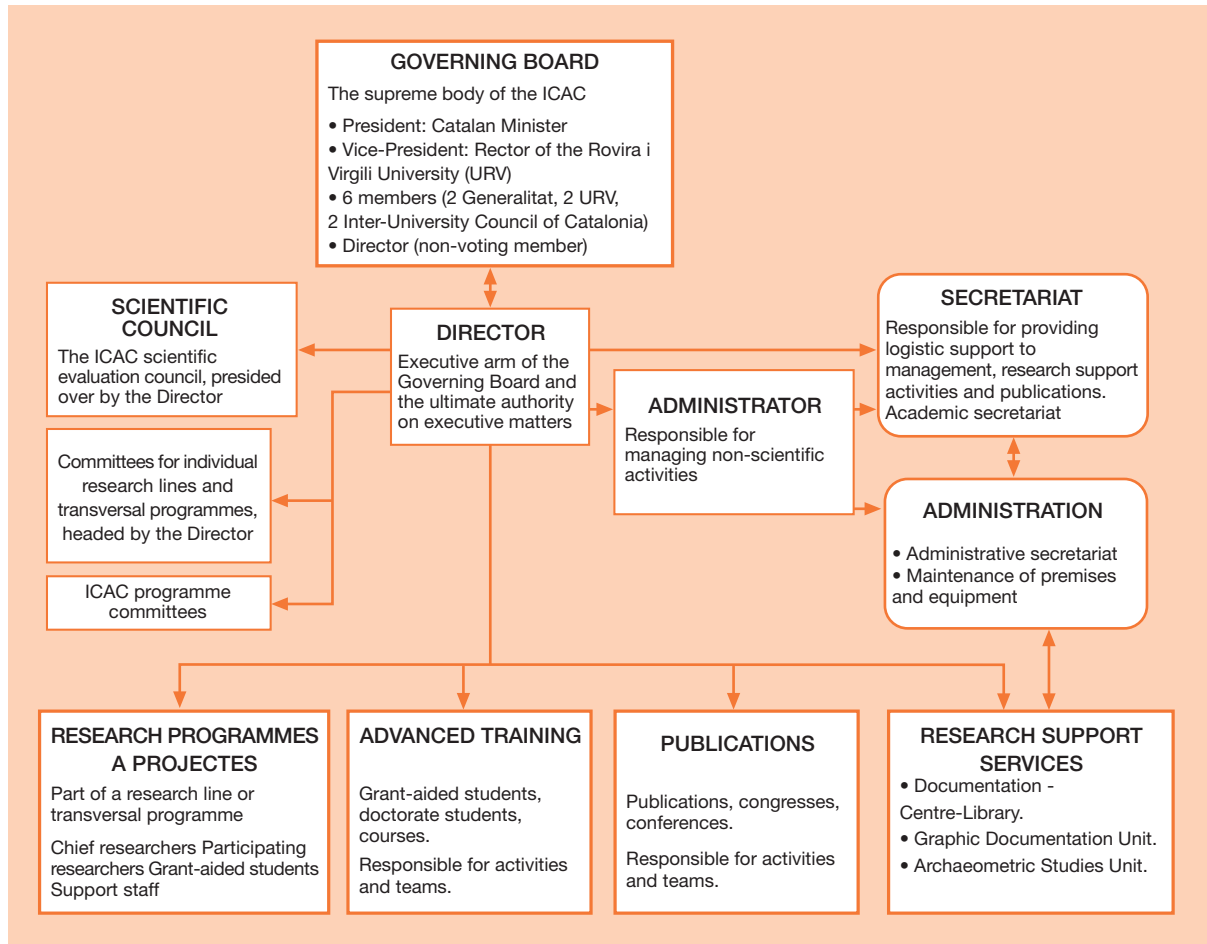
Graphic 2
ICAC staffing by professional category for the period 2002-2006



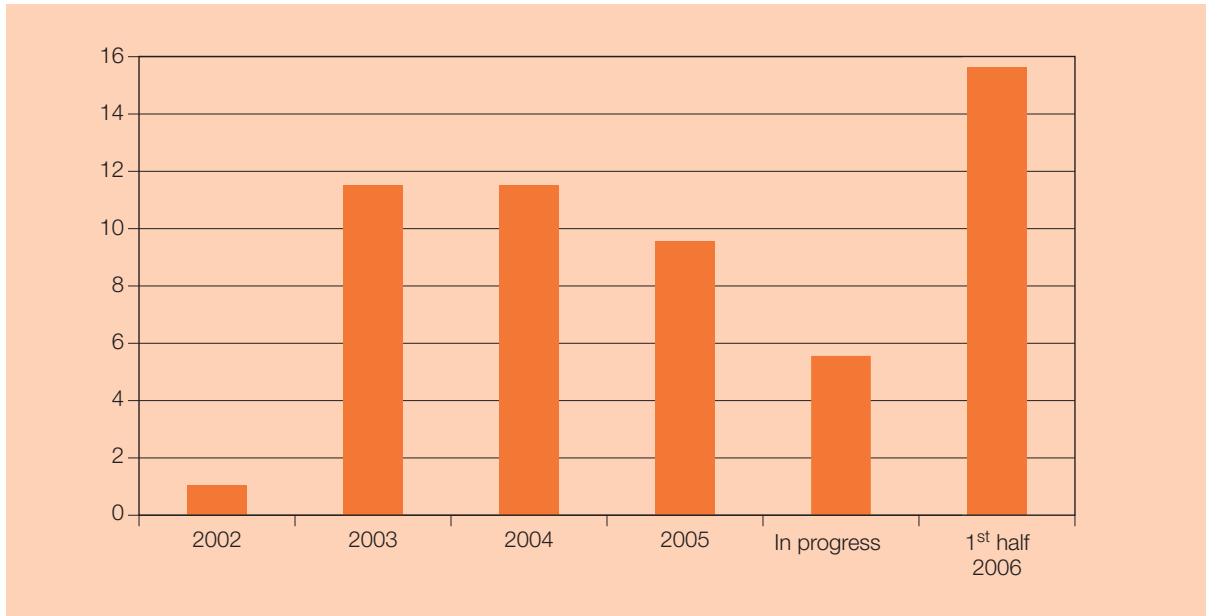
In order to implement its pioneering research function in the classical archaeology field, the ICAC has focused its research activity by developing programmes and projects that focus on relevant aspects of the discipline and that apply the most advanced techniques available in science and technology. It also fosters interdisciplinary research involving experimentation with new analysis

techniques. The ICAC works closely with other Spanish and international research centres working in the same field. Considered particularly important is the development of close ties with universities with the aim of creating an international cooperation platform that will be a landmark in the European research context. The ICAC also cooperates with institutions that manage the archaeological heritage

Figure 1
ICAC organigram



Graphic 3
Signed cooperation agreements



of Catalonia with the aim of contributing to scientific and cultural studies. It also provides advanced training in archeology and publishes the results of its research.

2. The ICAC headquarters: *Tarraco*

The city of Tarragona is the former Roman city of *Tarraco*, the brilliant capital of *Hispania Citerior*. Designated a World Heritage city by UNESCO in 2000, it represents the perfect backdrop for the activities of the ICAC. The ICAC premises on the campus of the Rovira i Virgili University (URV)—located in the historic part of the city in what was the market of the forum—was ceded to the ICAC by Tarragona Town Council. The building, comprising 1,129 square metres distributed over

three floors, has offices, researcher rooms, a documentation centre/library, workshops and laboratories, a meeting room, seminar rooms, and storage rooms. Following extensive renovations to the building, it was finally inaugurated as the ICAC headquarters on 26 September, 2003. Thereafter the ICAC gradually acquired equipment, focusing particularly on the research support areas.

3. ICAC research

3.1. Research lines and transversal programmes

The scientific mission of the ICAC, which is both diverse and interdisciplinary, is structured along four research lines that cover key aspects of classical archaeology. Research is conducted by in-house

and sub-contracted researchers, occasionally in cooperation with external or visiting researchers. Each research line focuses on specific programmes that include a range of research projects that are representative of the scientific aims of the ICAC.

The research lines established according to the First Four-Year Action Plan (2002-2006) are as follows:

1. The archaeology of ancient cities. This research focuses on the study of ancient cities from archaeological remains and an analysis of the processes that had a bearing on their establishment, their idealogical and urban formation, and their evolution into late Antiquity and the Middle Ages. A number of projects are underway, most of which fall under the following three programmes:

- *Tarraco*: This consists of four projects focusing on the archaeological planimetry of *Tarraco*, subterranean aqueducts in *Tarraco*, excavations under the Cathedral of Tarragona, and the Francolí suburb in paleochristian *Tarraco*.
- Archeology in the Roman city of *Iesso* (Guissona).² This includes projects such as the excavation and study of Roman public baths in *Iesso*, a study of *Cardo Minor* No. 2 in the Roman city of *Iesso*, and a study of the northern wall of the *Iesso* fortifications.
- Archeological mission to Oxyrhynchus (al-Minya, Egypt): This includes projects such as excavations of the early necropolis, in Osireion and in the western suburb of the city of Oxyrhynchus.

2. The archaeology of landscapes, settlements and territory. This research focuses on all aspects of landscapes, forms of settlement and

territorial organisation in Antiquity, taking into account environmental, social and human aspects. Among the several projects being conducted under this programme, the following are worthy of particular mention:

The scientific mission of the ICAC is structured along four research lines that cover key aspects of classical archaeology. The ICAC also has three transversal programmes underway, aimed at developing methodological disciplines.

- Settlement dynamics and territorial organisation forms in the Mediterranean *Hispania Citerior*: This includes a project on land occupation and mountain landscape forms in the eastern Pyrenees from Antiquity to the Middle Ages.
- *Ager Tarraconensis*: Among other projects, this includes a study of the ancient archaeological landscape in *Ager Tarraconensis* (on the right bank of the Francolí river).
- Formation of complex societies in Catalan protohistory: The following projects are covered by this programme: the Iberian citadel at Alorda Park and Toixoneres (Calafell, Baix Penedès), the necropolis of Santa Madrona (Riba-roja d'Ebre, Ribera d'Ebre), the Iberian settlement at Castellot de la Roca Roja (Benifallet, Baix Ebre), the Iberian settlement at Castellet de Banyoles (Tivissa, Ribera d'Ebre) and the protohistoric site at Sebes (Flix, Ribera d'Ebre).

² *Iesso* is the ancient name of a settlement located at the site of the town of Guissona, in the Catalan hinterland.

Recently initiated within this line of research is a project in cooperation with the UMR 5140 (Archaeology of Mediterranean Societies) database for Roman settlement in Catalonia and Languedoc, operated by the Lattes Archaeology Centre under the auspices of the French National Scientific Research Centre (CNRS).

3. *Instrumentum domesticum*. Materials and trade in the ancient world. Referring to materials and trade in the ancient world, this research focuses on archaeological finds from Antiquity and the reconstruction of trading activities from these materials. These constitute an instrument for the study of the economic, social and political aspects of classical Antiquity. Four research projects are being implemented as part of this programme, as follows: a thematic network in regard to the production and sale of copies of fine porcelain imports to Hispania Citerior in the late Roman Republic and early Roman Empire; a restudy of fine black-glazed pottery from Cosa Deposits A-E (Ansedonia, Tuscany, Italy); and studies of Xanten amphora materials (*Colonia Ulpia Traiana*, Xanten, Germania Inferior) and of amphora marks and workshops in *Barcino* (Barcelona).

4. Classical archaeology and artistic productions. This research examines artistic creation in antiquity and the corresponding archaeological documentation for sculpture, painting, mosaics and the minor arts. It also covers other closely related areas of study, such as, for example, iconography, crafts production, political and social use of the plastic arts, and associated ideological aspects. One of the most notable projects in this programme is the *Corpus Signorum Imperii Romani. Hispania*.

The ICAC is also involved in three transversal programmes, involving classical archaeology

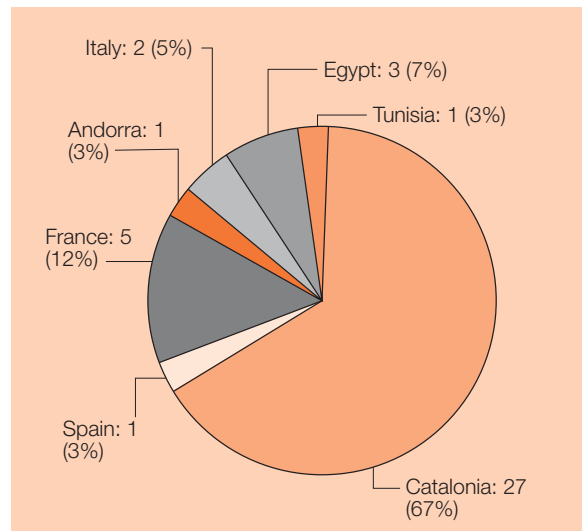
methods and applied disciplines, which interact with the above-mentioned four lines of research.

1. Experimental scientific methods and techniques applied to classical archaeology. Archaeometry, paleoenvironment and environmental archaeology.
2. Information and communication technologies applied to classical archaeology.
3. Classical archaeology and studies of Antiquity. Textual sources, epigraphy and numismatics.

3.2. A selection of research projects underway in the ICAC

The ICAC has a total of 33 research projects underway, classified according to different programmes. It is also active in developing synergies between the institutions and agents involved in these projects. Some of these projects are described in further detail below.

Graphic 4
Geographical distribution of ICAC research projects (2003-2006)



Archaeological planimetry of *Tarraco*

This project is co-funded by the Museum of History of Tarragona and the ICAC and is also supported by the Directorate-General of Cultural Heritage of the Generalitat. It has as its aim the compilation of planimetric information on archaeological activities implemented in Tarragona in the 20th century and up to 2004. This task involves a very extensive historiographic and administrative documentation process prior to digitalization and processing using a Geographical Information System (GIS). To achieve the aims of the project, information collected by fifty archaeologists who have worked in the city in the last twenty-five years is being compiled. Close to 450 official archaeological excavation reports and around 500 scientific publications are being consulted. The project is assisted by four archaeology companies operating in the city of Tarragona, by the Royal Tarraconensis Archaeology Society and by the Urban Development Department of Tarragona Town Council. A topography company is applying Global Positioning System (GPS) technology to the main monuments in the city and the planimetries are being implemented in the current city layout using coordinates provided by the Cartographic Institute of Catalonia.

The project also involves advising the Museum of History of Tarragona on the preparation of a 1:500 scale model of *Tarraco in the 2nd century*. All the planimetry necessary to create the scale model was generated and supplied by the ICAC on the basis of the historical information collected for its planimetry project.

This project is in its final phases and it is anticipated that it will be included in the town's land registry and made available on the Internet. Once concluded it will be a valuable tool that will enhance archaeological research and analysis in ancient *Tarraco* by permitting data to be drawn together for comparison

The Archaeological planimetry of *Tarraco* project has as its aim the compilation of planimetric information on archaeological activities implemented in Tarragona in the 20th century and up to 2004.

purposes and by facilitating a range of publication, management and heritage protection activities.

The Can Tacó Roman archaeological site (Montmeló–Montornès del Vallès)

In 2003, the Montmeló and Montornès del Vallès Town Councils undertook a project aimed at the scientific and cultural recuperation of the archaeological site at Can Tacó-Turó d'en Roïna. Since 2004 the ICAC has taken charge of the scientific management of the archaeological dig. Currently underway is the process that will enable the site to be declared a cultural site of national interest by the Directorate-General of Cultural Heritage of the Generalitat of Catalonia. Data obtained to date would indicate that this site was the location of a Roman *castellum* in the 2nd century BCE. To date the site marked out covers 1,740.80 square metres. The Can Tacó -Turó d'en Roïna project is particularly important because there are very few such sites in the Iberian Peninsula and because the settlement was military. Its chronology, moreover, is relatively old, dating back as it does to the early days of the romanisation of Iberia. It is located at a strategic point in the Via Augusta, which was the main axis for the process of romanising the peninsula.

Found in the first dig in 2003 were remains of parietal decorations, consisting of stucco and part of a denticulated moulding. The layout of the stucco indicated the possible existence of an upper floor

Since 2004 the ICAC has taken charge of the scientific management of the archaeological dig at the Can Tacó Roman archaeological site (Montmeló–Montornès del Vallès).

where it was likely that the walls of a residential part of the *castellum* were decorated. The decorations recreated an ashlar arrangement that was a characteristic element of wall decorations in an early Pompeian style and which was used mostly in the 2nd century BCE. The singularity of the find and the restoration work has made an invaluable addition to archaeological knowledge.

The ancient *Ager Tarraconensis* archaeological landscape (right bank of the Francolí river)

This is a joint project that involves 16 town councils from the Camp de Tarragona area, the Provincial Council of Tarragona, the Tarragonès County Council, the Baix Camp County Council, the Institute of Catalan Studies, and the company ACESA. The aim is to study how the *Ager Tarraconensis* landscape evolved between Iberian times and late Antiquity. The landscape is being analysed using a multidisciplinary and diachronic approach, by means of studies of geology, mineral and water resources, soil change, climate, crops, flora, fauna, domesticated animals, territorial morphology, and human settlements. The project is broad in its scope and the intention is to remain open in terms of the territory to be covered. It is implemented in cooperation with a number of institutions, including the Municipal Museum of Cambrils and the Salvador Vilaseca Archeology Museum of Reus.

Exhaustive data collection to date has focused on 173 sites. An extensive prospection campaign has

already been conducted, on the basis of which an intensive campaign will be prepared, i.e., field work based on total ground coverage by means of sampling bands strategically drawn on the map of the area. A paleobotanical study has also been prepared involving a study of humid areas for pollen column extractions; this will enable a study of the vegetation, crops, fauna and climate of the area. To complete this study of landscape and site evolution, the geological sedimentology and the edaphology of the area is being studied, as also water and mineral resources. Studies of the road system, agrarian structures and land registration systems have begun to reveal that there was significant Roman centuriation of this area; i.e. orthogonal divisions of agrarian plots. At a fairly advanced stage is the study of archaeological materials in public and private collections. The first dig has already started, at the Molins Nous (Riudoms) site, where an oil-producing agrarian structure is being studied. All the information obtained will be processed in a Geographical Information System (FIS), which will generate thematic layers of maps for the area, thus fulfilling the basic aim of the project.

All the information generated will be contrasted with studies of the geology, crops, domesticated animals, climate, water resources, fauna and vegetation for the area. This project will add considerably to existing knowledge on the economy of ancient *Tarraco*, in terms of territorial arrangements and political and social structures. It will also improve understanding of how the Romans influenced the basic configuration of a landscape that endured to the Middle Ages and to some degree to modern times.

Land use and mountain landscapes in the eastern Pyrenees from Antiquity to the Middle Ages

This project is being implemented jointly with the

Prehistoric Studies and Research Centre of the University of Barcelona, the Jaume Almera Institute of Earth Sciences of the Advanced Scientific Research Council (CSIC), the Limnology Unit of the Centre for Advanced Studies of Blanes and the Historical Research Service of the Government of Andorra. It focuses on the study of the archaeological evidence of Pyrenean mountain anthropization, and pays particular attention to pastoralism in Antiquity. The study is divided into a number of sub-projects covering the Cerdanya plain, the Madriu valley in Andorra and the Cadí range in Alt Urgell.

Archaeological mission to Oxyrhynchus (al-Minya, Egypt)

The Oxyrhynchus archaeological site is located next to the small town of al-Bahnasa, 180 kilometres south of Cairo. It was discovered during an expedition by Napoleon Bonaparte to this area of Egypt, and since 1897 it has undergone intermittent excavations. The structures of the city and various burials site are known, and thousands of papyri have been found, mostly written in Greek.

In 1992, when an important necropolis was discovered covering the Saitic to Christian period (664 BCE–640 CE), the Egyptian Antiquities Organisation (now the Supreme Council of Antiquities) offered the University of Barcelona the opportunity to form a mixed archaeological mission in order to continue excavations at Oxyrhynchus and organise a research programme that would deepen understanding of Oxyrhynchus society. The mission, which got underway in 1992, was organised in cooperation with the University of Cairo, the Paul Valéry University of Montpellier, the Polytechnic University of Catalonia, the Generalitat, the Catalan Society of Egyptology and the Archaeological Museum of Barcelona. The Rovira i Virgili University joined this group in 1999.

In mid-2004, the ICAC, the University of Barcelona and the Rovira i Virgili University signed a three-year programme-contract to support and publicise the Oxyrhynchus mission with the aim of fostering research into the site and publicising and ensuring the sustainability of the mission. The mission aims to continue the historical and archaeological studies of the previous excavations and to implement a new stage aimed at enhancing research efforts, preserving the structures, and developing a museum project for the site.

The Master Plan for 2004-2006, drawn up by the mission's scientific committee, establishes three basic aims. The first aim is to conduct an archaeological, historical and philological study of the site and to publish the results of this research in accordance with Egyptian legislation. The second aim is—in agreement and cooperation with the Egyptian authorities—to contribute to the preservation and maintenance of the site, and to prepare it for cultural and tourism purposes. The final aim is to assist with the training of researchers and specialists in Egyptology and in eastern Greek and Roman archeology.

The site is being excavated in three sectors. The first of these is the early necropolis, which is a burial area with tombs and funerary deposits that date from the Saitic period (7th century BCE) to the invasions of the Arabs at the beginning of the 7th century CE. Tombs 1 to 3 are the largest and most important monuments on the site, given the writing on the building and on the sarcophagi. The second sector is the Osireion, an area of worship in the environs of the old city, with a large subterranean chamber dedicated to Osiris and used for annual rituals in this god's honour. The third sector is the western suburb of the city, a large tract that commences just west of the walls. In this area there are a number of necropolises dating from the

Greek-Roman and subsequent periods, and a fortified dwelling dating from the Byzantine era.

Corpus Signorum Imperii Romani. Spain

The *Corpus Signorum Imperii Romani* (CSIR) is an international project which has as its aim the compilation and analysis of data on sculptures dating from ancient Roman times. This initiative arose in the framework of the 8th International Congress of Classical Archaeology, which took place in Paris in 1963, organised by the International Association for Classical Archaeology.

The CSIR-Spain project is directly supported by the Autonomous University of Barcelona, the University of Murcia and by the ICAC. Also involved are the Spanish Historical Heritage Institute of the Ministry of Culture, the Catalan Studies Institute, the Directorate-General for Cultural Heritage of the Generalitat, and the University of Alacant. A scientific committee composed of academics and experts from Spanish universities and non-Spanish bodies performs the monitoring and evaluation work related to the project .

As for the structure of the collection, the CSIR-Spain series is organised in three volumes, each divided into fascicules. Volume I refers to current administrative divisions, Volume II is ordered by themes, and Volume III describes museums and collections.

In addition to these three volumes published since 2002, published in 2005 was Volume II, Fascicule 2, *La escultura hispánica figurada de la antigüedad tardía (siglos IV-VII)*, by Sergio Vidal Álvarez, which described Hispanic sculpture in the 4th to 6th centuries. Currently in press is Volume I, Fascicule 3, *Los sarcófagos romanos de la Bética*, by Luis Baena and José Beltrán, on the subject of sarcophagi in

Roman Andalusia. Work is also underway on four new fascicules, on Roman sculpture in the Republican era in Hispania, Roman sculpture in Murcia, paleochristian sarcophagi in *Tarraco* and *Tarraconensis*, and finally, the sculpture of *Barcino* (Barcelona).

4. Advanced training in classical archaeology

One of the ICAC's objectives is to provide advanced training in the classical archaeology field. Conscious of the need to coordinate efforts in the training of new researchers, the ICAC has offered an Inter-University Doctorate in Classical Archaeology, in cooperation with the Autonomous University of Barcelona (UAB) and the Rovira i Virgili University (URV), since the 2004-2005 academic year.

Since 2003, the ICAC has organised twelve major specialist international seminars for doctoral students, researchers and professionals from the archaeology fields, as well as a number of minor courses.

In the context of the reform of post-graduate studies, an Inter-University Master's in Archaeology was launched in the 2005-2006 academic year by the UAB, the URV and the ICAC. In 2005, conscious of the interest in international studies and with the aim of improving teaching quality, the UAB, the URV and the ICAC signed an agreement with the University of Provence and the Second University of Naples with a view to creating a consortium to develop a programme for an international master's degree in archaeology, to be offered from the 2006-2007 academic year. The interest in this international master's programme is justified, above all, by the track records of the participating institutions in the archaeology, protohistory and classical studies fields in the western Mediterranean region. Researchers

and teachers from the consortium's participating institutions have already cooperated in a number of projects. From the 2006-2007 academic year, the Inter-University Doctorate in Classical Archaeology and the Inter-University Master's in Archaeology will be combined as a single officially approved post-graduate programme. Within this framework, the Official Inter-University Master's in Classical Archeology, which will be known as ARCHEOMED (Archeology of the Ancient Mediterranean), will be supported by the above-mentioned French and Italian universities.

5. Publication of research results

The ICAC publishes monographs under the title «Documenta»; to date four editions have been published, and a number of others are in press. The first publication, which went to press at the end of 2002, was the book by Eva Subías entitled *La corona imarcescible: Pintures de l'antiguitat tardana a la necròpolis alta d'Oxirinc (Mínia, Egipte)*, a study of mural paintings dating from the 5th and 6th century CE that decorated the walls of a paleochristian oratory discovered in the early necropolis of the ancient Egyptian city of Oxyrhynchus.

Good examples of the research carried out in Tarragona in recent years are represented by the books *Les termes públiques de l'àrea portuària de Tàrraco. Carrer de Sant Miquel de Tarragona*, edited by Josep M. Macias i Solé, and *Les basíliques paleocristianes del suburbi occidental de Tàrraco. El temple septentrional i el complex martiriàl de Sant Fructuós*, by Jordi López Vilar. The first of these books deals with the subject of the public Roman baths of Tarragona. Probably built in the first half of the 3rd century, they are a unique monument in the context of Roman archaeology in Hispania. The second of these books (based on the

From the 2006-2007 academic year, drawing on its previous advanced training experience, the ICAC offers a single officially approved post-graduate archaeology programme.

first doctoral thesis submitted to the ICAC) is an exhaustive description—covering ceramics, epigraphy, numismatics and paleopathology—of an excavation which confirmed, in 1994, the existence in Tarragona of one of the most important paleochristian complexes in the Iberian Peninsula. This publication includes a study of a suburban *domus* dating from the 4th century, a funerary basilica from the 5th century and related buildings.

The ICAC has also published *El Palatí. La formació dels palaus imperials a Roma*, by Ricardo Mar, which is a study of the topography of the Palatine Hill, a neuralgic centre of classical archaeology.

The ICAC has also participated in other publications. Published in 2005, within the framework of the *Corpus Signorum Imperii Romani Hispania* project, was the book *La escultura hispánica figurada de la Antigüedad tardía (siglos IV-VII)*. Although authored by Sergio Vidal Álvarez, the ICAC provided research support through its own Classical archaeology and artistic productions research project. The book was co-published by the ICAC, the Autonomous University of Barcelona, the University of Múrcia and Tabularium.

ICAC researchers have also published the results of their research in specialist journals, have attended a large number of national and international conferences and encounters, and have had their contributions subsequently published in the corresponding acts. Worthy of mention, for example,

was the talk on agrarian landscapes on rural landscapes *La dinámica de los paisajes agrarios antiguos: problemas de método, técnicas de análisis y nuevas perspectivas de investigación* given by Dr. Josep M. Palet at the University of Murcia in April 2005, in the framework of the 2nd Course in Field Archaeology 2004-2005: Ancient Archaeology, Territory and Landscapes. Strategies, Methods and Techniques. Another interesting presentation was the talk on domestic productive activities in the protohistoric north-eastern Mediterranean *Aproximación arqueológica a las actividades productivas en el ámbito doméstico en el Mediterráneo nordoccidental protohistórico*, given by Dr. Carme Belarte at the Casa de Velázquez, Madrid in April 2005, in the framework of the Round Table on Archaeological Approaches to

La catedral de Tarragona y su entorno. Nuevos datos sobre el recinto de culto del Concilium Provinciae Hispaniae Citerioris, given by Dr. Josep M. Macias, Joan Menchon, Andreu Muñoz and Immaculada Teixell at the international conference entitled Imperial Worship: Politics and Power, held in May 2006 and organised by the National Museum of Roman Art of Mérida.

6. Towards the creation of research support services

Since its commencement the ICAC has been committed to making resources available to support research. In 2006, in addition to its ongoing work on the development of a documentation centre, it has been developing two research support units, one on archaeometric studies and the other on graphic documentation. Once the process of equipping the three units is complete and the activity protocols have been consolidated, these units will provide a valuable service to researchers.

The Documentation Centre-Library has a total of 1,623 documents and 63 specialist journal titles.

Ancient Economies: Methodological and Theoretical Problems. Dr. Ramon Járrega also gave an interesting presentation, entitled *The end of the Roman amphorae in the coastal Hispania Tarraconensis (Catalonia) in the 6th-7th centuries. The flat-based amphorae*, at the 2nd International Conference on Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry (Aix-en-Provence-Marseille-Arles, 13-16 April 2005). Dr. Jordi Principal gave a seminar on Iberian black-glazed pottery entitled *Ceramica a vernice nera tardoellenistica nel NE della penisola Iberica: tradizioni produttive e pratiche sociali*; organised by the Scuola di Specializzazione in Archeologia of the University of Lecce (Lecce, Pulla, Italy), this seminar was held in June 2005. More recently we can mention the presentation on the cathedral of Tarragona, entitled

6.1. Documentation Centre-Library

The Documentation Centre-Library has a document collection consisting of archaeology and other monographs, reference works and dictionaries, journals, audiovisual materials and databases. After just two years in existence, the centre has a total of 1,623 documents, and 63 specialist journal titles. The centre is located on the first floor and has a consultation area of 47 square meters, 16 reading points, and terminals providing access to the Internet and to a range of databases.

The goal of the Documentation Centre-Library is to safeguard all the scientific information generated by the ICAC, to provide bibliographical support to the research performed by the ICAC, to act a reference point for researchers, to cooperate with

other libraries specialising in archeology, and to establish bibliographical exchange systems.

In 2004, the ICAC signed a cooperation agreement with the Rovira i Virgili University with the aim of coordinating documentary management. Under this agreement, the ICAC catalogues its collection according to the VTLS system and has its collection included in the Collective Catalan University Catalogue.

Recently the private collection of Dr. Pere de Palol, who unfortunately passed away in December 2005, was donated to the ICAC. Dr. Palol was an eminent Catalan archaeologist who played an instrumental role in setting up the ICAC.

6.2. Graphic Documentation Unit

The Graphic Documentation Unit has three fundamental goals: to provide support for training of drawing and photography professionals and technicians; to implement research and develop innovative methods and approaches to optimising existing technical resources and exploring new applications (photogrammetry, digital photography, 3D laser scanning, Global Positioning Systems, etc); and finally, to support archaeological research projects and research groups in (or associated with) the ICAC, as also other research centres, public bodies, companies and individuals.

The services which this unit proposes to offer in the medium term include drawing and delineation for movable materials, archaeological planimetry, planimetric delineation and infographic processing, topographic support for archaeological fieldwork, graphic and cartographic information processing, the creation of plans and prior studies of monuments and buildings, photographic documentation and post-processing, and graphic restoration and reconstruction. Since 2005, the unit has supported

ICAC research projects and projects in Andorra, Catalonia, the Balearic Islands, Italy, Tunisia, etc.

6.3. Archaeometric Studies Unit

The Archaeometric Studies Unit, which is composed of an interdisciplinary team of archaeologists and geologists, is the fruit of a collaboration with the Autonomous University of Barcelona (Department of Geology and the Laboratory for the Study of Lapidary Materials of Antiquity). Applying analytical techniques to inorganic archaeological materials (ornamental stones, building materials, pottery, etc), it offers field and laboratory services in support of ICAC research projects and of heritage management, archaeological and restoration projects implemented by public and private organisations. The analyses involve standard analysis and characterisation techniques, but services also include chemical analyses, electronic microscopy, X-ray diffraction, cathode-luminescence, isotope analysis, thermoluminescence (to date pottery), etc.

7. Towards the future

As far as the future is concerned, the main challenge of the ICAC will be the consolidation of both its structure and activities. In the research field this will require the consolidation of research teams in cooperation with other Catalan institutions that operate in the classical archeology field. The ultimate aim is to become a referent for classical archaeological research in both Catalonia and in Europe, and to place ICAC researchers at the heart of European research in this field. It will be necessary to consolidate and develop the research support units further and to consolidate the advanced teaching programme within the framework of strong links with universities in Catalonia, Europe and other countries, so as to ensure quality training for professionals and researchers in this field.