



PREHISTORIC BEDMAR, SPAIN

Course ID: ARCH 365AT

July 1 – July 31, 2019

FIELD SCHOOL DIRECTOR:

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INTRODUCTION

Bedmar is a town in the province of Cordoba, in southern Spain. Here, in the Serrezuela mountain range, members of the Fundación Instituto de Investigación y Evolución Humana (FIPEH) have identified archaeological sites that point to human presence dating from 100,000 to 4,000 Before Present (BP).

In 2017, the most recent site, a cave called Cueva del Rio Cuadros, was identified and found to extend over 400 meters. At the entrance there are human remains and ceramic sherds which date the site to the Bronze Age (4,000 BP). Further inside the cave, several burial structures were found along the corridor; some of them are rooms walled with rocks, and at least one of them contains human remains. The cave also contains paintings possibly dating to the upper Paleolithic (50,000 – 10,000 BP).

The main goal of the 2019 field season is to understand and describe the culture and populations that inhabited the Sierra Magina in prehistoric times through excavation and analysis of the remains recovered from the Cueva del Rio Cuadros site and surrounding environs.

We will work to determine the chronology of the site by studying the paintings, human bones, and archaeological material. We will also attempt to determine the size of the site by means of topological study of the cave.

To this end, during the forthcoming season we aim to:

- Establish shovel test pits (STP) to look for more galleries within the cave.

- Analyze of the gallery wall to look for more paintings and carvings which might illuminate symbolic and artistic activity in the upper Paleolithic.
- Excavate burial structures and some of the rooms.
- Conduct physical anthropology studies of the human bones.
- Obtain samples of charcoal (if any) and samples of bones for carbon dating.
- Obtain geological samples for sedimentological, mineralogical and petrographic thin section analysis.
- Record of the location and description of objects for further analysis.

BACKGROUND

Prior to Cueva del Rio Cuadros, the first site discovered around the Serrezuela mountain range was Cueva Rota in 2013; it was excavated for the first time in 2015. That season revealed more than 600 archaeological artifacts, most of which were lithic tools that correspond to Mousterian culture, dating it to the Middle Paleolithic (100,000 - 40,000 BP). The quality, type, and density of these remains suggest that this site was mainly dedicated to flint knapping.

After Cueva Rota was discovered, a second site was identified: Cueva del Portillo, a Magdalenian site (17,000 – 12,000 BP) which has been excavated since 2016. About 2,500 pieces have been unearthed including faunal remains and lithic tools, along with the presence of several hearths. Among the remains there are two remarkable artifacts: two complete necklaces made of shells dating to 13,000 years ago.

ACADEMIC CREDIT UNITS & TRANSCRIPTS

Credit Units: Attending students will be awarded 8 semester credit units (equivalent to 12 quarter credit units) through our academic partner, Connecticut College. Connecticut College is a private, highly ranked liberal arts institution with a deep commitment to undergraduate education. Students will receive a letter grade for attending this field school (see grading assessment and matrix). This field school provides a minimum of 160 direct instructional hours. Students are encouraged to discuss the transferability of credit units with faculty and registrars at their home institution prior to attending this field school.

Transcripts: An official copy of transcripts will be mailed to the permanent address listed by students on their online application. One more transcript may be sent to the student home institution at no cost. Additional transcripts may be ordered at any time through the National Student Clearinghouse: <http://bit.ly/2hvurkl>.

COURSE OBJECTIVES

The objective of this field school is to introduce participants to the field of archaeological science, the Quaternary period, and relevant topics in the study of human evolution, providing them with theoretical and practical training in archaeological methodologies and techniques of fieldwork.

The skills targeted in the curriculum of the field school are divided into two main sections: Fieldwork (excavation and laboratory) and Coursework (lectures and practicum).

Excavation: Students will dig shovel test pits and excavate 1x1 meter squares in a Cartesian coordinate system. Additionally, students will process sediment in an on-site dry sieve.

Laboratory: Laboratory processing will be taught in another wing of the same complex of buildings in which students are housed. The participants will learn to clean, identify, classify, and register artifacts in a digital database. Additionally, the participants will work on the sediment extracted from the site. This includes washing, drying, wet-sieving, and sorting heavy fraction.

Coursework: Lectures will be taught by researchers and professors from both Spanish and international universities, as well as members of FIPEH. The focus of the lectures is to help students contextualize the work being done at the site in the literature on the Quaternary period of human evolution.

Practicum: A series of activities will expose students to various professional skills used in the excavation and study of sites from the quaternary period of human evolution and the challenges of excavating in caves.

PREREQUISITES

This field school is designed for undergraduates and graduate students in archaeology, history, art history, biology, geology, and any other field related to archaeology, as well as any other person interested in archaeology.

DISCLAIMER – PLEASE READ CAREFULLY

Our primary concern is with education. Traveling and conducting field research involve risk. Students interested in participating in IFR programs must weigh whether the potential risk is worth the value of education provided. While risk is inherent in everything we do, we do not take risk lightly. The IFR engages in intensive review of each field school location prior to approval. Once a program is accepted, the IFR reviews each program annually to make sure it complies with all our standards and policies, including student safety.

We do our best to follow schedule and activities as outlined in this syllabus. Yet local permitting agencies, political, environmental, personal, or weather conditions may force changes. This syllabus, therefore, is only a general commitment. Students should allow flexibility and adaptability as research work is frequently subject to change.

The Cave of Rio Cuadros site is located in a steep terrain, so it is recommended that participants bring hiking boots with ankle support. Some hiking up- and downhill will be required every day. The excavation will take place close to the cave entrance as well as deep inside a cave, so in a dark and humid environment. The temperature will be relatively low in comparison to the outdoor temperature. The floor can be rocky and slippery. For these reasons, hiking boots with ankle support and helmets are mandatory. The climate outside the cave will be hot and dry, so it is recommended that participants bring light-colored, breathable clothing as well as a hat. Additionally, sunscreen is also recommended.

If you have any medical concerns, please consult with your doctor. For all other concerns, please consult with the project director.

LEARNING OUTCOMES

Techniques: Survey and excavation in Paleolithic sites; Preservation, restoration and conservation of Quaternary archaeological material

Method & Theory: Prehistory of Iberian Peninsula; Paleontology Systematics; Taphonomy; Anthracology; Palynology; Dating methods (C14, OSL, U/Th); Paleoanthropology and Human Evolution; Physical Anthropology; Flint Knapping; Use-wear analysis; Restoration and Preservation; Speleology Basics

TRAVEL & MEETING POINT

Hold purchasing your airline ticket until six (6) weeks prior to departure date. Natural disasters, political changes, weather conditions and a range of other factors may require the cancelation of a field school. The IFR typically takes a close look at local conditions 6-7 weeks prior to program beginning and make

Go/No Go decisions by then. This time frame still allows the purchase of discounted airline tickets while protecting students from potential loss of airline ticket costs if we decide to cancel a program.

On arrival and departure dates, FIPEH staff will provide transportation between the accommodations and two locations:

- Bus Station Jaén (Jaén, Spain)
- Train Station Linares-Baeza (Jaén, Spain)

Further details will be provided at the pre-departure online orientation.

If you missed your connection or your flight is delayed, please call, text or email project director immediately. A local emergency cell phone number will be provided to all enrolled students.

GRADING MATRIX

50% of Grade	Laboratory work, fieldwork, workshops, and lectures.
20% of Grade	Attendance, Participation and Behavior: willingness to engage in the activities, lectures, and work, relationship with classmates, staff and local community, respect for facilities, site and regional cultural heritage.
30% of Grade	Field notebook that will be submitted and evaluated at the end of the course.

VISA REQUIREMENTS

Spain is a party to the Schengen Agreement. U.S. citizens may enter Spain for up to 90 days for tourist or business purposes without a visa. Your passport should be valid for at least three months beyond the period of stay. You may need to provide proof of sufficient funds for the duration of your stay and a return airline ticket. (<http://travel.state.gov/content/passports/english/country.html>).

Citizens of other countries are asked to check the embassy website page at their home country for specific visa requirements.

ACCOMMODATIONS

Accommodations are in shared rooms (4-6 beds) located in Municipal Dormitory (Residencia Municipal) in the town of Bedmar. Pillows and sheets are provided. Rooms are equipped with AC. Bathrooms are shared, and each is equipped individual showers. The common areas are cleaned once a week by professional cleaners. Breakfast, lunch and dinner will be provided 7 days a week at the residence. It is based on a Mediterranean diet. There will be special recipes for those who have dietary restrictions such as diabetes, allergies or gluten intolerance and vegetarians.

COURSE SCHEDULE

Schedule of Activities

Monday - Friday	
Time	Activity
7.30	Beginning of the day
8.00 – 8.30	Breakfast
8.45	Depart for Cueva del Río Cuadros
9.00 – 15.00	Archaeological Activities / Laboratory Activities (11.00 – 11.30 mid-morning snack)
15.30 – 16.30	Lunch
16.30 – 19.00	Free time
19.00 – 21.00	Lecture
22.00 – 23.00	Dinner

23.00	Free time
24.00	End of the day

Weekend 1

Saturday	
Time	Activity
8.00	Beginning of the day
8.30 – 8.45	Breakfast
9.00 – 14.00	Speleology Workshop
14.30 – 15.30	Lunch
16.00 – 21.00	Speleology Workshop
22.00 – 23.00	Dinner
23.00	Free time
24.00	End of the day

Sunday	
Time	Activity
8.00	Beginning of the day
8.30 – 8.45	Breakfast
9.00 – 14.00	Speleology Workshop (optional)
14.30 – 15.30	Lunch
16.00 – 21.00	Speleology Workshop (optional)
22.00 – 23.00	Dinner
23.00	Free time
24.00	End of the day

Weekend 2

Saturday	
Time	Activity
8.00	Beginning of the day
8.30 – 8.45	Breakfast
9.00 – 14.00	Field Trip (location TBD)
14.30 – 15.30	Lunch
16.00 – 21.00	Free time
22.00 – 23.00	Dinner
23.00	Free time
24.00	End of the day

Sunday	
Time	Activity
9.00	Beginning of the day
9.00 – 10.00	Breakfast
10.00 – 14.30	Free time
14.30 – 15.30	Lunch
16.00 – 21.00	Free time
22.00 – 23.00	Dinner
23.00	Free time

24.00	End of the day
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Weekend 3

Saturday	
Time	Activity
8.00	Beginning of the day
8.30 – 8.45	Breakfast
9.00 – 14.00	Workshop on Identification of Primate and Human Fossils throughout Hominin Evolution
14.30 – 15.30	Lunch
16.00 – 21.00	Field Trip (location TBD)
22.00 – 23.00	Dinner
23.00	Free time
24.00	End of the day

Sunday	
Time	Activity
8.00	Beginning of the day
8.30 – 9.00	Breakfast
9.00 – 14.00	Field trip (optional; location TBD)
14.00 – 15.00	Lunch (sandwich)
18.00	Return to Lucena
22.00 – 23.00	Dinner
23.00	Free time
24.00	End of the day

Schedule of lectures

Week 1		
Date	Time	Lectures
Mon	7pm – 9pm	Opening
Tue	7pm – 9pm	Introduction to Archaeology of the Quaternary
Wed	7pm – 9pm	Archaeological methodology of excavation and laboratory work
Thu	7pm – 9pm	Nondestructive methods in archaeological prospecting (Ground-penetrating radar)
Fri	7pm – 9pm	Introduction to Speleology

Week 2		
Date	Time	Lecture
Mon	7pm – 9pm	Paleontology Systematics: Mammal Identification (teeth and cranial/postcranial bones)
Tue	7pm – 9pm	Analytical Methods in Taphonomy
Wed	7pm – 9pm	Herpetofauna
Thu	7pm – 9pm	Anthracology (identification of wood charcoal)
Fri	7pm – 9pm	Palynology (identification of pollen)

Week 3		
Date	Time	Lecture

Mon	7pm – 9pm	Dating Methods: C14 and OSL
Tue	7pm – 9pm	Dating Methods: Uranium–Thorium
Wed	7pm – 9pm	Archaeology of the Iberian Peninsula
Thu	7pm – 9pm	Methods of Restoration and Conservation in Archaeology
Fri	7pm – 9pm	Paleoanthropology and Human Evolution

Week 4		
Date	Time	Lecture
Mon	7pm – 9pm	Physical Anthropology
Tue	7pm – 9pm	Physical Anthropology
Wed	7pm – 9pm	Flint knapping
Thu	7pm – 9pm	Use-wear analysis
Fri	11am-12pm	Closing

EQUIPMENT LIST

Mandatory:

- Hiking boots providing ankle support
- Hat
- Light-colored, breathable clothing for hot weather
- Sunscreen (SPF 50 recommended).
- Sun glasses
- Water bottle

Recommended:

- Any medication you need, prescription or otherwise, to last for the duration of the field school,
- Hiking poles.

Cave Excavation:

Helmet, caving suit/coverall, gloves and headlights are provided, but students are welcome to bring their own equipment.

REQUIRED READINGS

Cortés Sánchez, M., et al., *The Mesolithic–Neolithic transition in southern Iberia*, *Quat. Res.* (2012), doi:10.1016/j.yqres.2011.12.

https://websites.pmc.ucsc.edu/~apaytan/publications/2012_Articles/Sanchez%20et%20al%202012.pdf

Zapata, Lydia & Peña-Chocarro, Leonor & Perez, Guillem & Stika, Hans-Peter. (2004). *Early Neolithic Agriculture in the Iberian Peninsula*. *Journal of World Prehistory*. 18. 283-325. 10.1007/s10963-004-5621-4.

Martín Socas, Dimas & Massieu, María & Caro, José & Javier Rodríguez-Santos, F. (2017). *The beginning of the Neolithic in Andalusia*. *Quaternary International*. 10.1016/j.quaint.2017.06.057.

Leonor Peña-Chocarro *, Lydia Zapata ** (2010), *Neolithic agriculture in the southwestern Mediterranean región*.

Neus Isern & Joaquim Fort & António Faustino Carvalho & Juan F. Gibaja & Juan José Ibañez, *The Neolithic Transition in the Iberian Peninsula: Data Analysis and Modeling*, *J Archaeol Method Theory* (2014) 21:447–460 DOI 10.1007/s10816-013-9193-4

Cristina Valdiosera, Torsten Günther, Juan Carlos Vera-Rodríguez, Irene Ureña, Eneko Iriarte, Ricardo Rodríguez-Varela, Luciana G. Simões, Rafael M. Martínez-Sánchez, Emma M. Svensson, Helena Malmström, Laura Rodríguez, José-María Bermúdez de Castro, Eudald Carbonell, Alfonso Alday, José Antonio Hernández Vera, Anders Götherström, José-Miguel Carretero, Juan Luis Arsuaga, Colin I. Smith, Mattias Jakobsson, *Four millennia of Iberian biomolecular prehistory illustrate the impact of prehistoric migrations at the far end of Eurasia*, Proceedings of the National Academy of Sciences Mar 2018, 115 (13) 3428-3433; DOI: 10.1073/pnas.1717762115

Robert Chapman, *Urbanism in Copper and Bronze Age Iberia?*, Proceedings of the British Academy, 86, 29-46

Dalia A. Pokutta, *Food, Economy And Social Complexity In The Bronze Age World: A Cross-Cultural Study*, *Musaica Archaeologica* 1/2017 23-41

RECOMMENDED READINGS

Francisco CONTRERAS CORTÉS, Juan Antonio CÁMARA SERRANO, Auxilio MORENO ONORATO, Gonzalo ARANDA JIMÉNEZ, *LAS SOCIEDADES ESTATALES DE LA EDAD DEL BRONCE EN EL ALTO GUADALQUIVIR (PROYECTO PEÑALOSA. 2ª FASE). V CAMPAÑA DE EXCAVACIONES (2001)*, <https://www.ugr.es/~fccortes/curriculum/anuario2001.pdf>

FRANCISCO CONTRERAS CORTÉS (*) JUAN ANTONIO CÁMARA SERRANO (*) RAFAEL LIZCANO PRESTEL (*) CRISTÓBAL PÉREZ BAREAS (*) BEATRIZ ROBLEDOS SANZ (***) GONZALO TRANCHO GALLO (**), *ENTERRAMIENTOS Y DIFERENCIACION SOCIAL lo EL REGISTRO FUNERARIO DEL YACIMIENTO DE LA EDAD DEL BRONCE DE PEÑALOSA (BAÑOS DE LA ENCINA, JAEN)*, TRABAJOS DE PREHISTORIA 52, n.o 1, 1995, pp. 87-108, <http://tp.revistas.csic.es/index.php/tp/article/viewFile/433/448>

JUAN ANTONIO CÁMARA SERRANO * y FERNANDO MOLINA GONZÁLEZ *, *Armed conflict traces in Southeastern Iberia Late Prehistory: The Chalcolithic study case*, CPAG 23, 2013, 99-132. ISSN: 2174-8063

GONZALO ARANDA JIMÉNEZ (*) FERNANDO MOLINA GONZÁLEZ (*), *ARCHAEOLOGICAL FIELDWORKS IN THE BRONZE AGE SITE OF CERRO DE LA ENCINA (MONACHIL, GRANADA)*, TRABAJOS DE PREHISTORIA 62, n.o 1, 2005, pp. 165 a 179, [https://www.webgea.es/doc/pub_tp62\(1\).pdf](https://www.webgea.es/doc/pub_tp62(1).pdf)

EVA MARÍA MONTES MOYA, *LAS PRÁCTICAS AGRÍCOLAS EN LA ALTA ANDALUCÍA A TRAVÉS DE LOS ANÁLISIS CARPOLÓGICOS (Desde la Prehistoria Reciente al S. II d.n.e.)*, 2014, INSTITUTO UNIVERSITARIO DE INVESTIGACIÓN EN ARQUEOLOGÍA IBÉRICA DEPARTAMENTO DE PATRIMONIO HISTÓRICO UNIVERSIDAD DE JAEN, ISBN 978-84-8439-879-0. <http://oa.upm.es/10267/2/PARTE-2.pdf>