NEANDERTHALS IN SOUTHWESTERN IBERIA: THE COMPANHEIRA CAVE (SOUTHERN PORTUGAL)

Course ID: HIST 301CM
July 4-July 31, 2022

Academic Credits: 8 Semester Credit Units (Equivalent to 12 Quarter Units)
School of Record: Iowa Wesleyan University

DIRECTORS
Dr. João Cascalheira– Assistant Researcher, Interdisciplinary Center for Archaeology and Evolution of Human Behavior (ICArEHB) at the Universidade do Algarve (jmccascalheira@ualg.pt)
Dr. Nuno Bicho – Director of the Interdisciplinary Center of Archaeology and Evolution of Human Behavior (ICArEHB) at the University of Algarve (nbicho@ualg.pt)

Due to the Covid 19 pandemic, only fully vaccinated students will be allowed to attend this program. Please contact CFS Enrollment Department if you have any questions or concerns.

PROGRAM DESCRIPTION

The timing and genesis of Anatomically Modern Humans (AMH) and the emergence of cognitive complexity related to Homo sapiens is one of the more interesting topics in prehistoric archaeology. Evolutionary genetics and the fossil record indicate that the emergence of Homo sapiens happened in Africa sometime around 300,000 years ago during the Middle Stone Age and corresponding to a limited genetic diversity that can be explained by a population bottleneck during that time.

In Europe the scenario is very different and believed to have occurred with the arrival of our own species to Eastern Europe sometime around 50-45,000 years ago (corresponding to the beginning of the Upper Paleolithic) with the replacement of the Neanderthals and the Denisovans and their culture (the Middle Paleolithic). Presently, the assumption is that Neanderthals went extinct and after some both cultural and biological mixing with AMH.
It is now generally believed that the cultural capacity and cognitive complexity of the Neanderthals was identical to those of the AMH, potentially revealed in different forms. However, it is now recognized that Neanderthals had art, body decoration, and organic tools, such as bone tools, and explored marine resources and lives on coastal settings.

The cave site of Companheira, Portimão, located in one of the most important estuaries in the southern Portuguese coast, offers excellent opportunities to investigate the regional adaptation of Neanderthals to a coastal/estuarine environment. The site consists of intact Middle Paleolithic deposits with exceptional organic material preservation, including both faunal and floral materials. These superb preservation qualities enable research that focuses on subsistence and technology, as well as, potentially, symbolic behavior.

Companheira cave was discovered in 2016 during the construction of the water treatment plant for the city of Portimão. Initial archaeological testing was carried out in that same year, confirming the presence of archaeological remains dating to the Middle Paleolithic with the presence of stone tools, bones, and shells. Later, two of those bones were confirmed as human, and proteomic and aDNA analyses are underway to identify the species present at Companheira cave.

For the 2022 season, students will work on both internal chambers of the cave, where archaeological and human remains were found, as well as outside, to locate the original entrance of the cavern. They will excavate, recover and record all lithic artifacts, faunal remains and beads. In the lab, students will wash and catalog the recovered materials and carry out preliminary analyses of lithic materials and faunal remains.

The Companheira Field School is a project supported by the University of Algarve and the Interdisciplinary Center for Archaeology and Evolution of Human Behavior (ICArEHB) and provides training for graduate and undergraduate students in the latest archaeological techniques. The field school is an opportunity to work together with an international team of archaeologists in order to increase student’s knowledge and gain practical archaeological experience. It is a wonderful way to experience archaeology first hand, and decide whether it is something you want to spend your life doing. Field school experience is an important addition on your CV if you decide to apply for graduate work in archaeology.

This field school forms part of a larger research project directed by Prof. Nuno Bicho and Dr. João Cascalheira (Interdisciplinary Center for Archaeology and Evolution of Human Behavior at University of Algarve, Portugal) on the emergence and development of complex human cognition during the transition from Neanderthals to early Modern Humans in Southwestern Europe. Your work within the field school will be part of publication effort engaged by the two directors.

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<tr>
<th>IMPORTANT DISCLAIMER</th>
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<tr>
<td>The Center for Field Sciences was established to support field training in a range of sciences at sites across the world. Traveling and conducting field work involves risk. Students interested in participating in any CFS program must weigh the potential risk against the value of education provided for the program sites of their choosing.</td>
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<td>Risk is inherent in everything we do and the CFS takes risk seriously. A committee of leading scholars review each field school location prior to approval. Once a program is accepted, the CFS continually monitor conditions at the program site, its academic quality and ability to conduct as safe of an experience as possible.</td>
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<td>The CFS does not provide trip or travel cancellation insurance. Students are encouraged to explore such insurance policies on their own. Post Covid 19, most basic policies do not cover trip cancelation due to pandemics. If you wish to purchase an insurance policy that cover such</td>
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COURSE OBJECTIVES

The objective of this field course is to provide students with a great and scientific experience of archaeological field methods. It is expected that the student will better understand how archaeology is practiced in the field and how it provides a window into our past, offering the possibility to gain basic understanding of the evolution of cultural complexity. Thus, this course has three primary goals:

1. To provide students with a practical working knowledge of archaeological field methods, specifically archaeological excavation in Stone Age contexts and new computer technologies applied to archaeology;
2. Introduce students to laboratory analytical methods, artifact cataloging, and conservation;
3. To introduce students to the intellectual challenges presented by archaeological research, including research design, the interpretation of data, and the continual readjustment of hypotheses and field strategies with regard to information recovered in the field.

The field course will take place in the cave site of Companheira, in the Algarve, southern Portugal. Students will spend half of their time on archaeological excavation, and the other half in the laboratory.

Students will participate in the following research activities:

Excavations: Students will participate in guided excavations at selected areas of the Companheira site using a series of state-of-the-art field and computer techniques.

Recording: Students will participate in recording stratigraphy, filling out excavation forms, making top plans and elevations, 3D mapping finds, maintaining an excavation notebook, writing a report, and recording finds.

Laboratory: Scheduled lab tasks will include washing, sorting, drawing, and analyzing Stone Age artifacts and faunal remains. If students show interest, they may assist in specific analysis potentially leading to participating in the international publication of the results.

Cataloging: Students will participate in sorting and cataloging archaeological materials using state-of-the-art software.

LEARNT SKILLS

We are aware that many students may not seek academic careers but will pursue employment in the private sector. To that end, we are following the Twin Cairns Skills Log Matrix™ (https://twincairns.com/skill-set-matrix/) and will provide training for the following skills:
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<tr>
<th>Skill</th>
<th>Skill Definition</th>
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<tr>
<td>Artifact curation</td>
<td>Ability to safely register, document and store a wide range of artifact types in curation facilities following state and federal laws</td>
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<tr>
<td>Artifact Processing</td>
<td>Ability to identify, collect and record a wide range of artifact types, understanding their relative fragility within different site types and conditions</td>
</tr>
<tr>
<td>Artifact Recovery</td>
<td>Ability to record, safely excavate and properly storage artifacts and ecofacts made of different types of materials (ceramics, metal, lithics, etc.) and various level of fragility</td>
</tr>
<tr>
<td>Data Software &amp; Management</td>
<td>Ability to create data recording systems and collect archaeological data, with understanding of both hardware and software capabilities</td>
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<tr>
<td>Large Hand Tools</td>
<td>Can operate a pickax, hoe or similar large hand tool to conduct excavations</td>
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<tr>
<td>Recording Sheets</td>
<td>Ability to understand and properly record excavation process, stratigraphy, sections and artifact documentation</td>
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<tr>
<td>Small Hand Tools</td>
<td>Can operate a trawl or similar small hand tool to conduct excavations</td>
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<tr>
<td>Total Station</td>
<td>Able to create maps and plans using a Total Station</td>
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<tr>
<td>Understanding Stratigraphy</td>
<td>Ability to understand the relationships between layers of both cultural and natural depositions</td>
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<tr>
<td>Artifact Washing</td>
<td>Ability to wash different artifact types while maintaining their material characteristics for research purposes</td>
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<tr>
<td>Recording-Excavations</td>
<td>Ability to understand, collect and record all excavation process and data</td>
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<tr>
<td>Screening</td>
<td>Ability to use geological and general screens to identify, collect and record small scale finds</td>
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<tr>
<td>Geoarchaeology</td>
<td>Ability to collect, sample and analyze soil and sediment samples through dry sieving, wet sieving and flotation</td>
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**COURSE SCHEDULE**

The course begins on Monday, July 4th and will meet every weekday and for a half-day on Saturdays until July 31st. A series of short lectures by project specialists and invited guests, mostly during the first three days of the project, will provide the cultural and archaeological background to the fieldwork. Field and lab work is between 8 am and 5 pm with a break for lunch between 1 pm and 2 pm. All lectures are 60 minutes.

**Monday, July 4**
11.30 am: Meeting at the city of Faro (airport or train station).
12.00 am: Drive to Gambelas
1.00 pm: Lunch
3.30 pm: General introduction to the project. Get settled in.
7.00 pm: Dinner

**Tuesday, July 5**
10.00 am: Lecture 1. Prehistory of Algarve (Nuno Bicho)
11.30 am: Lecture 2. Introduction to Regional Geology (Ana Gomes)
1.00 pm: Lunch
2.00 pm: Field trip to the main surrounding towns and local beaches

**Wednesday, July 6**
8.00 am: Meet minibus for drive to Companheira
9.00 am: Visit the site and preparation of excavation work
11.30 am: Return to the lab in Faro
1.00 pm: Lunch
3.00 pm: Lecture 3. Field methods: excavation and recording at Gruta da Companheira (João Cascalheira)

**Thursday, July 7**

Students are divided into two groups

Group A.
8.00 am: Lecture 4. Introduction to lithic analyses (Pedro Horta)
9.30 am: Lecture 5. Introduction to faunal analysis: recording animal bones and teeth (Cláudia Costa)
11.00 am: Handling artifacts and fauna

Group B.
8.00 am: Meet minibus for drive to Companheira
8.45 am: Excavation in Companheira
4.00 pm: Return to the Faro

**Friday, July 8**

Group A
8.00 am: Meet minibus for drive to Companheira
8.45 am: Excavation in Companheira
4.00 pm: Return to Faro

Group B.
8.00 am: Lecture 4. Introduction to lithic analyses (Pedro Horta)
9.30 am: Lecture 5. Introduction to faunal analysis: recording animal bones and teeth (Cláudia Costa)
11.00 pm: Handling artifacts and fauna

**Saturday (July 9)** All day field trip for archaeological and historical sightseeing

**Sunday (July 10) Day off**

**Monday-Friday (July 11-15)**
8.00 am: Meet minibus for drive to Companheira
8.45 am: Excavation (group A) and lab work (group B)
4.00 pm: Return to Faro
5.00 pm: End of lab work

**Saturday (July 16)**
8.30 am: Lecture 6. Introduction to Human evolution (Ricardo Godinho)
10.30 am: Lecture 7. Introduction to Geoarchaeology (Alvise Barbieri)
Free afternoon

**Sunday (July 17) Day off**

**Monday-Friday (July 18-22)**
8.00 am: Meet minibus for drive to Companheira
8.45 am: Excavation (group B) and lab work (group A)
4.00 pm: Return to Faro
5.00 pm: End of lab work

**Saturday (July 23)**
8.00 am: Lecture 8. Introduction to Report Writing (Monday - João Cascalheira and Nuno Bicho)
Free afternoon

Sunday (July 24) Day off

Monday-Wednesday (July 25-28)
8.00 am: Meet minibus for drive to Companheira
8.45 am: Excavation and lab work (groups will be organized to have the same number of excavation/lab hours)
4.00 pm: Return to Faro
5.00 pm: End of lab work

Thursday (July 28)
8.00 am: preparation of final report
2.00 pm: preparation of final report

Friday (July 29)
All day field trip to Évora (Archaeological and historical sightseeing)

Saturday (July 30)
8.00 am – 12.00 pm: preparation and delivery of final report

Sunday (July 31) Departure

TYPICAL WORKDAY
A typical workday starts with a brief meeting in the laboratory to establish goals for the day. After that, half of the team will go in the minibus to the archaeological site, while the other half will stay in the lab processing the materials recovered from the previous day. In both cases, a lunch break takes place from 1 pm to 2 pm, after which work is resumed until 5 pm.

ACADEMIC GRADING MATRIX
Students will be graded based on their work as follows:

40%: Participation: Attend and participate in each scheduled day (excavation, lectures, and laboratory)

30%: Field notes: Keep a field notebook that will be submitted and evaluated at the end of the course

30%: Final Report: a written report that includes the description of all activities occurred in both the field and in the lab, a synthesis of the results of the year field season and a preliminary interpretation of the finds within the context of the local and regional prehistory. This report should also include a description of the field and lab methods.

SKILLS MATRIX LEVELS
The school instructors will evaluate the level each student achieved on the list of skills provided above. Each skill will be graded on one of the following three levels:

Basic: Can perform the skill/task with some supervision.

Competent: Can perform the skill/task without any supervision.

Advanced: Can perform the skill/task and teach others how to do it.

ATTENDANCE POLICY
The required minimum attendance for the successful completion of the field school is 85% of the course hours. Any significant delay or early departure from an activity will be calculated as an absence from the activity. An acceptable number of absences for a medical or other personal reasons will not be taken into account if the student catches up on the field school study plan through additional readings, homework or tutorials with program staff members.

PREREQUISITES
None. However, this is hands-on, experiential learning and students will conduct archaeological field research in a cave site with a certain degree of difficulty in its access. Field work involves physical work and exposure to the elements and thus requires a measure of understanding that this will not be the typical university learning environment. You will have to work outdoors and will get sweaty and tired. Students are required to come equipped with sufficient excitement and adequate understanding that field work requires real, hard work, in the sun and wind. The work requires patience, discipline, and attention to detail.

PROGRAM ETIQUETTE
Portugal follows all the normal European etiquette. The Companheira field school located in Algarve, a heavily touristic region, recognizes the differential international habits. In addition, a good part of the time will be spent in an international academic environment, so English is frequently spoken. Nevertheless, the field school will be a specific context where the social environment is a key element for the success of learning – one must bear in mind that the students will be working and eating together, and living in close quarters for four weeks, under some physical duress. Thus, all students need to be respectful of everybody needs, and particularly each other individual space.

EQUIPMENT LIST
✓ Shower towel
✓ Beach towel & swim suite
✓ Wide brim hat or head cover
✓ Light jacket or raincoat
✓ Light cotton work pants
✓ Long and short sleeve cotton shirts
✓ Sunglasses with UV protection
✓ Light working boots and shower sandals
✓ Canteen or water container
✓ Insect repellent
✓ Sunscreen
✓ Daypack/backpack
✓ Personal medication

TRAVEL & MEETING POINT/TIME
We suggest you 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 program. The CFS typically takes a close look at local conditions 6-7 weeks prior to program beginning and make a Go/No Go decision by then. Such time frame still allows for the purchase deeply discounted airline tickets while protecting students from potential loss of airline ticket costs if CFS is forced to cancel a program.

Algarve is served at the main city of Faro by a national railway line that comes from Lisbon (the capital of Portugal) as well as by the Faro International Airport (FAO). The airport connects with all major European cities, so coming from the US you can fly to Faro via any of the main European connection points (London, Paris, Brussels, Amsterdam, Frankfurt, Berlin, Dusseldorf, and Lisbon, among many others).

Students should arrive in Faro on July 4th. There will be two meeting points: at the Faro International Airport and at the Faro train station, both at 11.30 am – students should inform the project directors which point they will use. Project staff members will meet the students and will drive (5 minutes) the team to Gambelas.
Please note that the field school will end on July 31st, and the whole team will be driven back to the two meeting points during the morning of that day.

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. If your flight is delayed or you miss the team’s designated meeting time, please call the emergency number provided so one of the staff members can pick you up at an arranged time at either of the meeting points.

VISA REQUIREMENTS

Portugal is a party of the Schengen Agreement. As such, US citizens may enter Portugal for up to 90 days for tourist or business without a VISA. Your passport should be valid for at least 6 months after your departure. Citizens of other countries are asked to check the Portuguese Embassy website page at their home country for specific visa requirements.

MEALS & ACCOMMODATION

Students will stay in a university residence located two minutes from the Gambelas Campus (where the archaeology laboratory is located), next to the Ria Formosa Natural Park and a few kilometers from Faro Beach and downtown Faro. The residence is composed of several apartments with double rooms, shared bathrooms, and a kitchen. Kitchens are equipped with stove, oven, microwave, fridge, table, chairs, washing machine and storage cabinets. Other amenities include internet connection study/social room with TV, proximity to a sports-friendly area, accessibility to services, supermarkets and restaurants.

Students can prepare and have breakfast in the apartment with supplies bought by the project. If going to the field, students should also prepare a light lunch to take. If staying in the laboratory, students can opt for three different options: go to the apartments (5 minutes walk) and have lunch there; bring lunch to the campus and use one of the outside tables; go to the cafeteria.

Dinner will always take place at the University’s cafeteria. The daily diet in Southern Portugal is Mediterranean diet and includes a wide diversity of food elements, including fish, shellfish, pork, beef, chicken, fresh vegetables, bread, beans, pasta, rice and potatoes. The cafeteria has vegetarian options but no alternatives for specialized diets such as vegan, kosher, etc.

PRACTICAL INFORMATION

International dialing code: +351

Money/Banks/Credit Cards: The local currency is the Euro (EUR) with an exchange rate of c. 1.20 US Dollars. All the most common credit card types are accepted in Portugal.

ATM Availability: ATM is available near the campus where the students are staying

Local Language: Portuguese

Measure units: degree Celsius (ºC), meter (m.), gram (gr.), liter (l)

Computers, mail and cell phones: You are encouraged to bring your own laptop or tablet to prepare your final report, and also a phone to keep in contact with loved ones at home. The accommodation facilities as well as the lab has internet access. If you have an unlocked telephone, you can purchase a local telephone/data SIM card. Unlocked US quad band and smart phones will work in Portugal. Basic cell phones can also be purchased in Faro.
To be contacted in Portugal, your family must dial +351 (if they call from the US) before the number. A week before the start of the field school we will forward an emergency number in case someone from home needs to contact you.

More generally, where electronics are concerned, Portugal has different plugs from the US, with a plug with two circular metal pins and operate on 220V / 50Hz. The plug looks like this:

You should check all of your electronics before you come to make sure that they will work in Portugal.

**ACADEMIC CREDITS & TRANSCRIPT (CFS text – do not change)**

Attending students will be awarded 8 semester credit units (equivalent to 12 quarter credit units). Students will receive a letter grade for attending this field school based on the assessment matrix (above). This program provides a minimum of 160 direct instructional hours. Students are encouraged to discuss the transferability of credit units with faculty and the registrar at their home institutions prior to attending this program.

Students will be able to access their transcript through our School of Record – Iowa Wesleyan University. IWU has authorized the National Student Clearinghouse to provide enrollment and degree verification ([https://secure.studentclearinghouse.org/tsorder/schoolwelcome?ficecode=00187100](https://secure.studentclearinghouse.org/tsorder/schoolwelcome?ficecode=00187100)). Upon completion of a program, students will get an email from IWU with a student ID that may be used to retrieve transcripts. The first set of transcripts will be provided at no cost, additional transcripts may require payment. If you have questions about ordering a transcript, contact the IWU office of the registrar at registrar@iw.edu.

**REQUIRED READINGS**

PDF files of all mandatory readings will be provided to enrolled students via a shared Dropbox folder.


Dibble, H. L., Marean, C. W., & McPherron, S. P., 2007 The use of barcodes in excavation projects: examples from Mossel Bay (South Africa) and Roc de Marsal (France). The SAA Archaeological Record, 7(1), 33-38.


RECOMMENDED READINGS
PDF files of all recommended readings will be provided to enrolled students via a shared Dropbox folder.


