

Palaeoenvironment and geoarchaeology of the Medjerda delta (Tunisia)

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1. INTRODUCTION

Interdisciplinary project, starting from an archaeological problem...

In the mean time, on the arrival of his men of war, Curio ordered proclamation to be made to the merchant ships, which lay at anchor before Utica, in number about two hundred, that he would treat as enemies all that did not set sail immediately for the Cornelian camp.
 (J. Caesar, The Civil Wars, 1, 31)

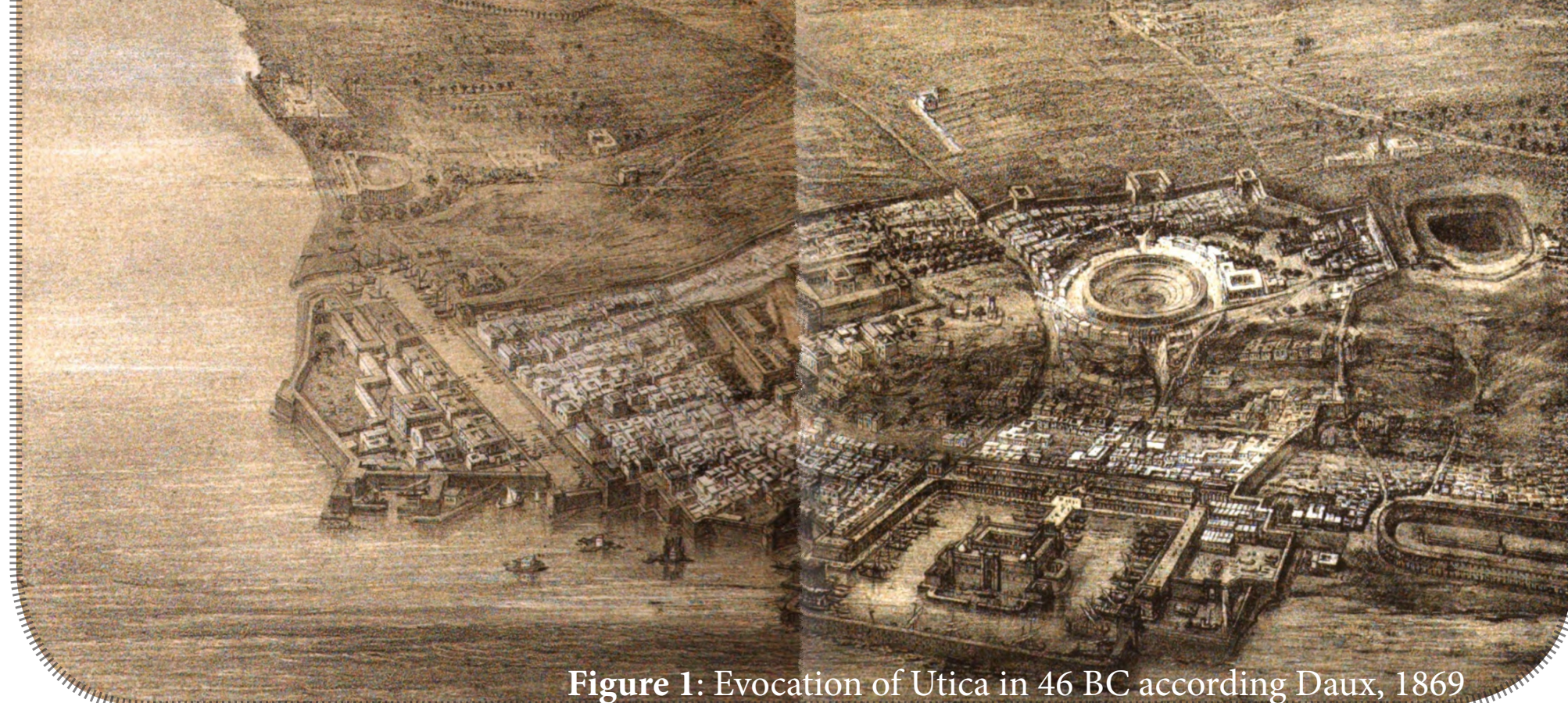


Figure 1: Evocation of Utica in 46 BC according Daux, 1869

► **Utica was a maritime and port city** (ancient authors) but:

- today, the ancient city is located on a promontory in the heart of the Medjerda delta, 12 km inland;
- the location of the Phoenician and Roman port infrastructures remains unknown.

4. RESULTS

Core UCN1 («Utique Compartiment Nord»)

Where? In a marshy area, North of the «North compartment» of the delta.

Why? To determine if this area could have been a marine bay during the occupation of the site. This bay could be a potential location for harbour infrastructures (quay, mole, ...) prior to clogging of the bay by the sediments carried by the wadi.

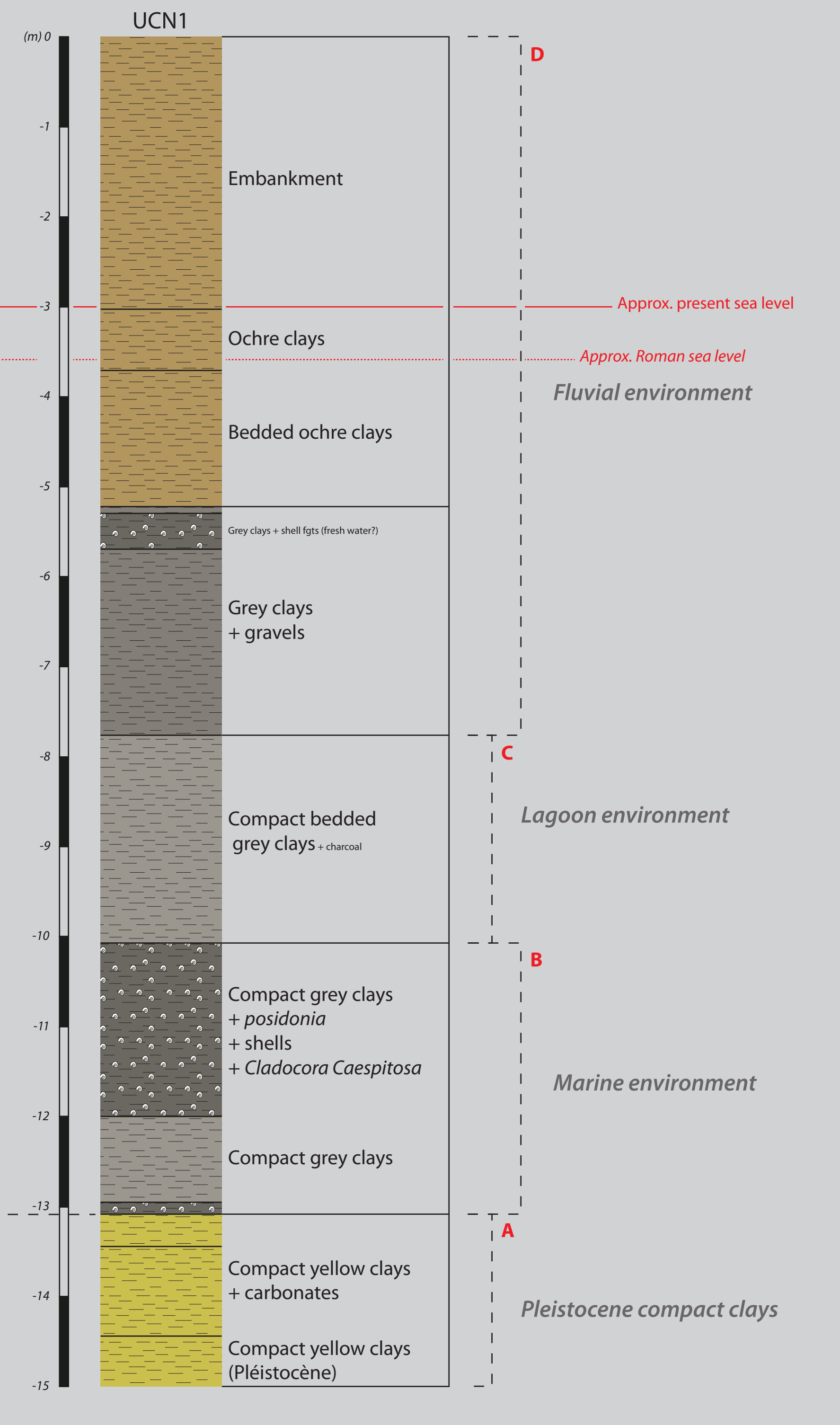


Figure 5: Stratigraphic log of the core UCN1 (E. Pleuger)

So? ► This area was effectively covered by the sea (Unit B) at any given time, which will be determined by the next radiocarbon dating.

► Then, the sediments carried by the Medjerda gradually clog the bay (lagoonal and then fluvial environment).

Sea inlet and/or marine bay? The size of the area covered by the sea during Antiquity has to be precised with two other points planned for the next coring campaign.

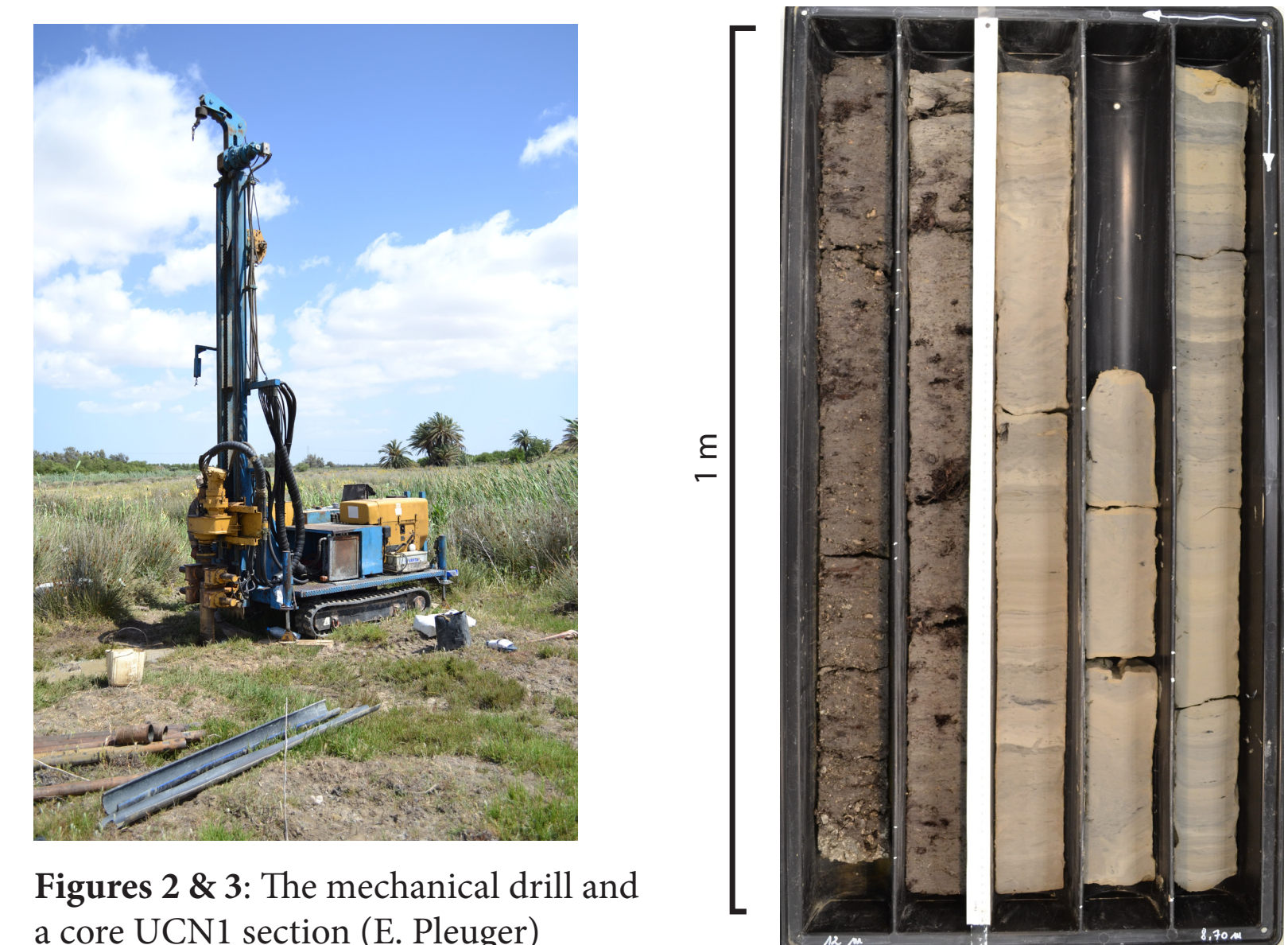
2. AIMS

Reconstruction of the Medjerda delta landscape changes during the Holocene and of the ancient coastline

- hypothesis on the location of the **Utica harbour infrastructures**

3. MATERIAL & METHODS

- **In the field:** mechanical extraction of cores (15-20 m deep) to reach the early Holocene. Two of these cores are particularly developed in this poster.
- **In the laboratory:** particle size analysis and quartz morphoscopy, sedimentological and biological analysis, mineralogical and geochemical approaches, radiocarbon dating.



Figures 2 & 3: The mechanical drill and a core UCN1 section (E. Pleuger)

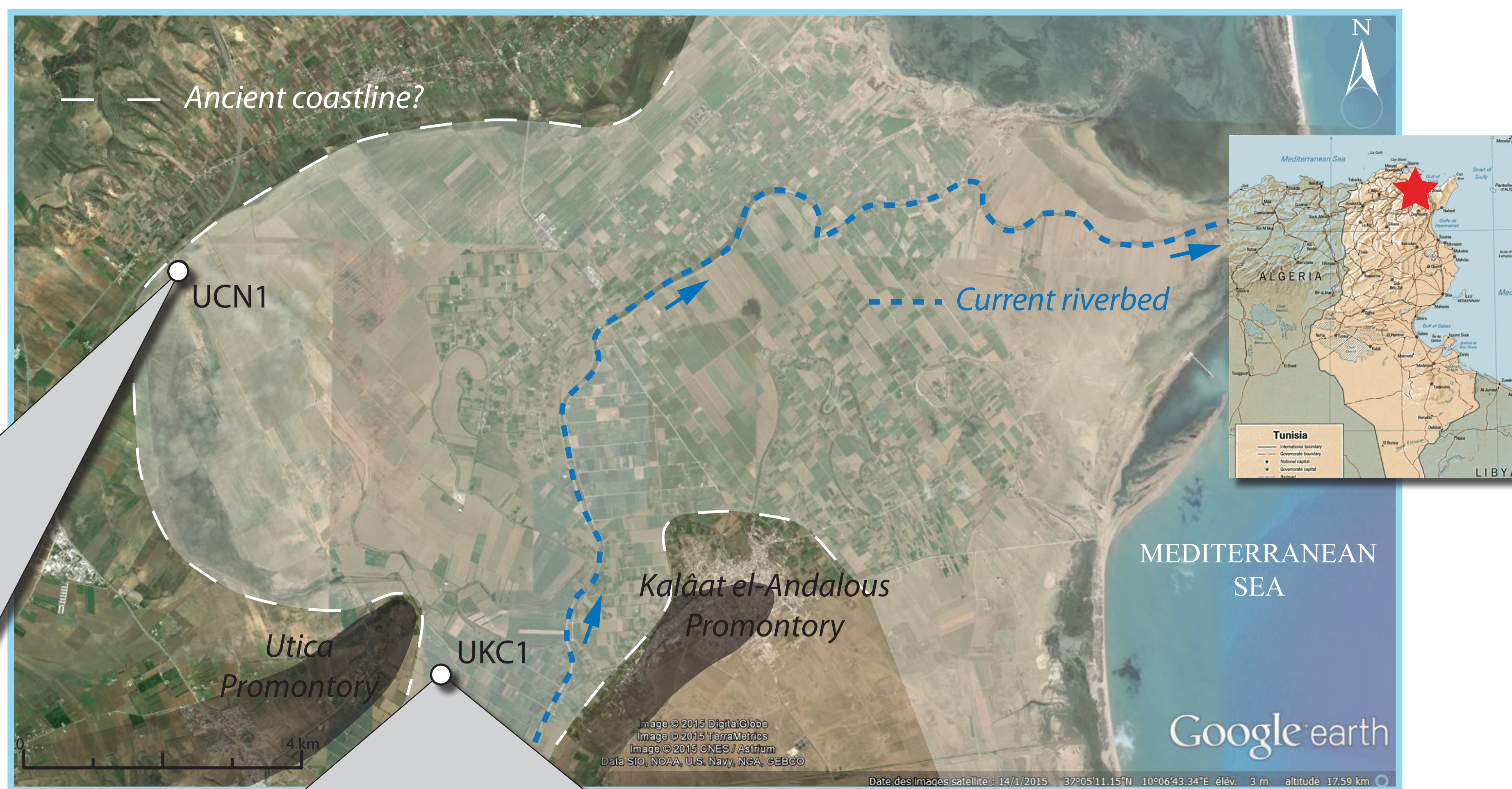


Figure 4: Location map of the Medjerda delta and the coring area; evocation of the ancient coastline (from Google earth; DAO E. Pleuger)

Core UKC1 («Utique-Kalâat Corridor»)

Where? South of the archaeological remains of Utica, in the corridor formed by the Utica and the Kalâat el-Andalous promontories, outside of the maximal extension of the ancient city (A. Lézine).

Why? To test the possibility of the presence of the sea at this point, and to understand the passage of the Medjerda into the «North compartment».

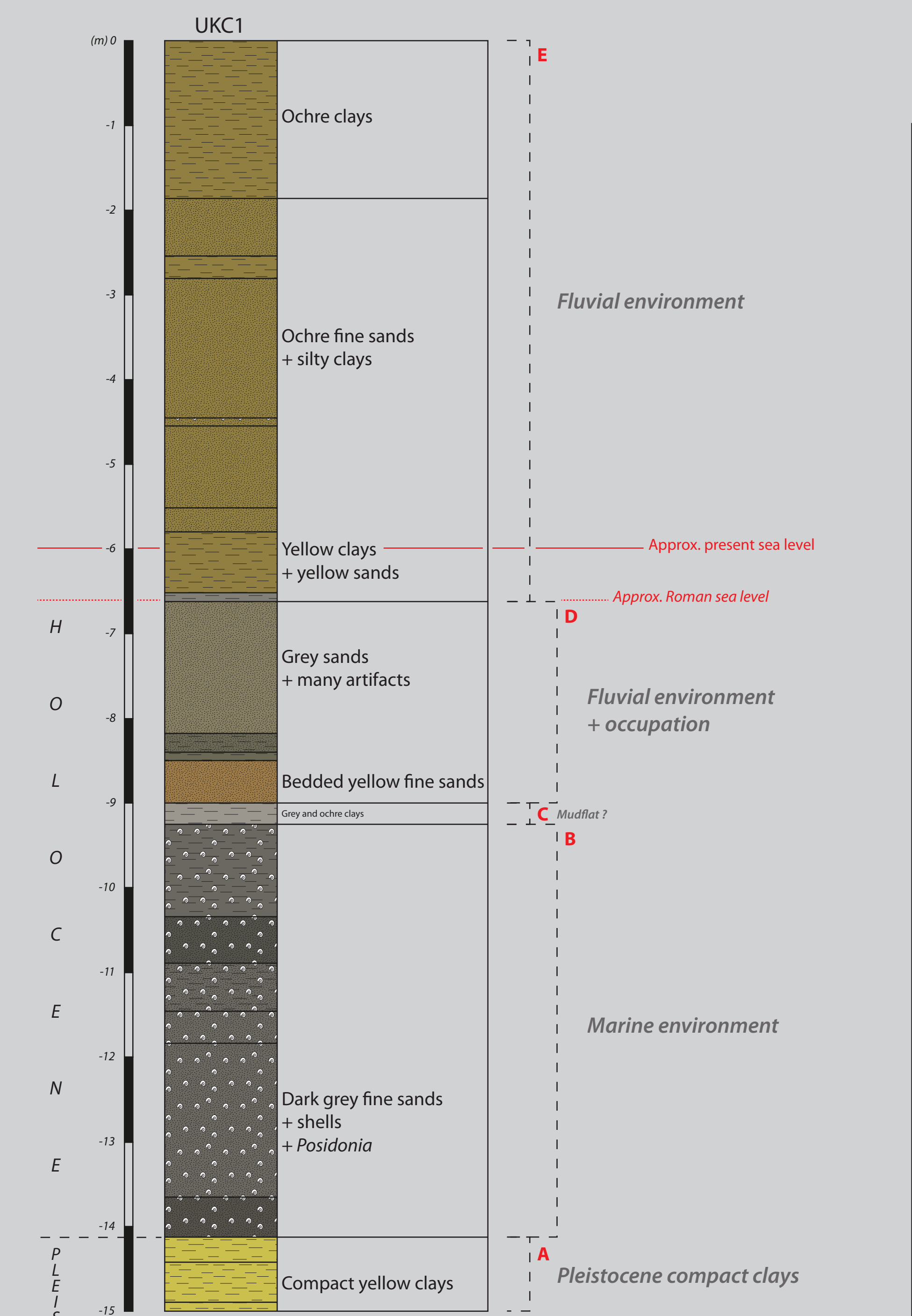


Figure 6: Stratigraphic log of the core UKC1 (E. Pleuger)

- So?**
- This point was also covered by the sea (Unit B).
 - Then the coastline recedes gradually following the sedimentary deposits of the wadi.
 - The many artifacts found in the sediments of the Unit D attest the occupation of this area.

This «corridor» area, materialised by the promontories of Utica and Kalâat el-Andalous, was invaded by the sea at a given time.

5. PERSPECTIVES

- Dating of the marine units in the two cores:
 - * to establish the chronological framework of the retreat of the coastline;
 - * to understand the passage of the Medjerda into the «North compartment» by the corridor Utica-Kalâat.
 - Is this marine presence contemporary or older than the occupation of the city of Utica?
- Laboratory analyses for palaeoenvironmental reconstruction
- Next coring campaign:
 - * in the «North compartment» to evaluate the maximum extent of the marine bay
 - * in the «corridor» to know if the Kalâat el-Andalous promontory was an island during Phoenician times

6. REFERENCES

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