

Introduction

Among the stone materials used in the monuments and buildings of the Spanish architectural historical heritage are some of early Cambrian limestone with archaeocyaths (Fig.1A). They can be both seen in the archaeological heritage of Roman times and in Christian cathedrals. In many cases, the location of the historic quarries from which the material was extracted is difficult because the mining labors have stopped long ago, or because a lack of record keeping.

Objective

The main objective of this study is to recognize previously unknown early Cambrian limestone with archaeocyaths in the architectural elements of Spanish cultural heritage and identify the Cambrian geological unit and the geographical location from which come.

Early Cambrian limestone with archaeocyaths in the Spanish cultural heritage

There is no prior inventory of the monuments where limestone with archaeocyaths were used, so it is necessary: 1) locate them; 2) document where possible; and 3) archival research. Until now, these limestones have been recognized in some Spanish monuments: Roman theatre of Mérida (Badajoz), Mosque of Córdoba, Cathedrals of Toledo and Segovia (Fig.1) and Royal Palace of Madrid (Menéndez, 2014; Tárraga Baldó, 2002). In the cases of the Royal Palace of Madrid and Cathedral of Segovia, the limestone provenance have been documented: Consuegra (Toledo) and Córdoba respectively (Fig.1) (Tárraga Baldó, 1992, 2002, 2009). Badajoz Province was firstly visited in order to identify the presence of these limestone in other different monuments. They have been clearly recognized in “Hornito de Santa Eulalia” chapel (Mérida) and in the Roman Theatre of Regina (Casas de Reina) (Fig.2).

Conclusions

So far, early Cambrian limestone with archaeocyaths is well documented in a small group of the architectural elements of Spanish cultural heritage. In other cases, there is not record. To study the different types of early Cambrian limestone, a detailed inventory must be conducted. Likewise, an exhaustive study of the archaeocyaths, microfacies and geochemistry of the samples will be necessary to identify the lithostatigraphic units and possible geographic locations from which they come. This type of research is key when it comes to restoring the monument and maintaining the wealth of artistic and cultural heritage.



Figure 1. A) Detail of early Cambrian limestone with archaeocyaths in the high altar of the Cathedral of Segovia. B) Lapidary archive. C) According to lapidary the limestone with archaeocyaths used in the high altar comes from Córdoba [“de Cordova”].

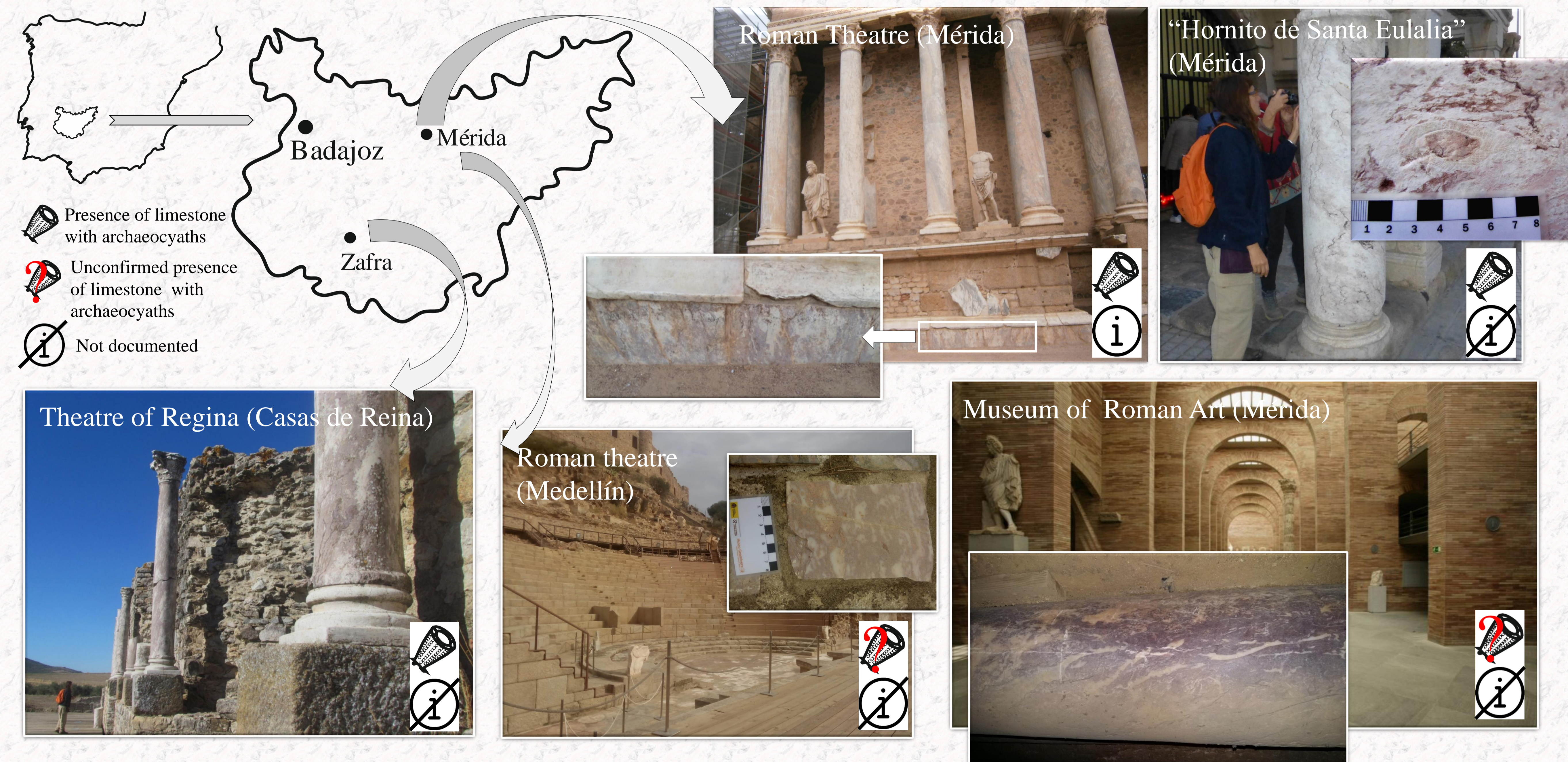


Figure 2. Some of the monuments visited in the Badajoz province.

References

- Menéndez S (2014) El registro de arqueociatos del Cámbrico en los Montes de Toledo (España). Cuadernos del Museo Geominero 17: 1-203.
- Tárraga Baldó ML (1992) Giovan Domenico Olivieri y el taller de escultura del Palacio Real. CSIC, 3 vols.
- Tárraga Baldó ML (2002) Rocas ornamentales para el retablo mayor de la Catedral de Segovia. Roc Maquina 74: 66-72.
- Tárraga Baldó ML (2009) Mármoles y rocas ornamentales en la decoración del Palacio Real de Madrid. Archivo Español de Arte, 82(328): 367-392.

