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An antler sickle from the Neolithic site of Costamar at Cabanes (Castellón) on the Mediterranean Spanish coast

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Introduction

Archaeological excavations at the settlement of Costamar (Figure 1) between 2006 and 2008 by the Fundació Marina d'Or uncovered an area of 57 905m² containing 683 archaeological features belonging to Neolithic, Bronze Age, Iberian, Roman, Islamic, late medieval, modern and contemporary times.

The Neolithic features belong to two phases (Figure 2). The first, with 203 storage pits, is characterised by the presence of pottery with incised-impressed decoration combined with plastic decoration and pigmentation with red ochre. One outstanding nearly complete vessel is decorated with an anthropomorphic motif (Figure 3). This phase has been dated by a cattle bone (*Bos Taurus*) to 5996±38 (4990–4790 cal BC at 2σ) and by a grain of barley (*Hordeum* sp.) to 5965±25 BP (4933–4786 cal BC at 2σ). The second phase is represented by two pits and 69 other negative features, with a radiocarbon determination for a secondary burial in Structure GE 90 of 4095±28 (2860–2500 cal BC at 2σ). A further 116 features with sparse finds have been attributed to the Neolithic, although it was not possible to assign them to either of the two phases, while another 118 features yielded no finds and have been classified as indeterminate.

An antler sickle found in a pit of the first Neolithic phase, an exceptional find as few examples are known from Europe (Flors 2010), forms the subject of this short note.



Figure 1. Location of Costamar on the Mediterranean coast of Spain.
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Figure 2. Aerial view of the first phase of excavation at Costamar.
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Figure 3. Neolithic pottery decorated with an anthropomorphic motif.
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The sickle

A red deer antler sickle was found in Structure GE 398-651 (Figure 4), on the base of a circular pit with diameters of 1.08m and 0.79m at its opening and base respectively, and a depth of 0.31m. The sickle was found together with five undecorated base sherds of a recipient with red ochre remains on its outer surface (Figure 5). The vessel surface treatment is reminiscent of the combing technique seen at other sites in eastern Iberia in the transition period from the sixth to fifth millennium cal BC.



Figure 4. The sickle at the time of discovery in pit GE 398-651.
Click to enlarge.



Figure 5. Potsherd found in pit GE 398-651.
Click to enlarge.

The sickle is a compound tool with a total length of 370mm (Figure 6). The antler was cut off at the handle end, or proximal part, of the implement. The distal end conserved one of the antler points, which would have been used to gather up the stalks. The most interesting feature of this tool is in the centre of the lateral face where there is a groove 25mm long and 8mm wide at its distal end, narrowing to 4mm. This groove was possibly formed by abrasion and on its left-hand side several incisions were caused by the manufacturing process. This groove must have been made to hold a single flint blade inserted diagonally.

The sickle would have been used by holding it at the proximal end, gathering up the stalks with the transversal antler point and holding them in the other hand. At this stage, the sickle would have been turned 90°, so that the stalks could be cut with the blade hafted in the sickle. The analysis of use-wear marks on the Costamar sickle has revealed that the internal face of the distal antler point is intensely polished by friction, presumably when the stalks were gathered up.



Figure 6. The antler sickle, with detail of haft.
Click to enlarge.

Nine sickles of the same form, but made of wood, have been recovered at the lake-side site of La Draga (Banyoles, Girona, Spain). These sickles consist of a main shaft with a hole in the centre and a transversal branch at 90° to the hole, like the specimen from Costamar. One of the sickles from La Draga still has a flint blade fragment inserted diagonally (Bosch *et al.* 2006; Palomo *et al.* 2011).

The Costamar sickle is a significant find in the context of harvesting technology in the Neolithic. The parallels at the site of La Draga and the documentation of flint blades used as oblique insertions in south-east France and the centre-northeast of the Iberian Peninsula suggest that this model of sickle was used over a wide area of the western Mediterranean basin in the early Neolithic (Ibáñez *et al.* 2008).

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References

- BOSCH, A., J. CHINCHILLA & J. TARRÚS. 2006. *Els objectes de fusta del poblat neolític de La Draga. Excavacions 1995–2005* (Monografies del Centre d'Arqueologia Subaquàtica de Catalunya 6). Girona: Museu d'Arqueologia de Catalunya.
- FLORS, E. 2010. *Torre la Sal (Ribera de Cabanes, Castellón). Evolución del paisaje antrópico desde la prehistoria hasta el medioevo* (Monografies de Prehistòria i Arqueologia Castellonenques 8). Castelló de la Plana: SIAP, Diputació de Castelló.
- IBÁÑEZ, J.J., J.E. GONZÁLEZ, J.F. GIBAJA, A. RODRÍGUEZ, B. MÁRQUEZ, B. GASSIN & I. CLEMENTE. 2008. Harvesting in the Neolithic: characteristics and spread of early agriculture in the Iberian peninsula, in L. Longo and N. Skakun (ed.) *Prehistoric*

technology 40 years later: functional analysis and the Russian legacy (British Archaeological Reports international series 1783): 183–95. Oxford: Archaeopress.

- PALOMO, A., J.F. GIBAJA, R. PIQUÉ, A. BOSCH, A. CHINCHILLA & J TARRÚS. 2011. Harvesting cereals and other plants in Neolithic Iberia: the assemblage from the lake settlement at La Draga. *Antiquity* 85: 759–71.

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