Supplementary Material B, Tab. S1, and Figs S2 and S3

Silicite productions at ThI-L1

The flint assemblage is composed of 472 artefacts (2591 g) and 562 unmodified items (3492 g) (Tab. S1; Gallotti et al. 2020). The flakes were exclusively produced from pebbles, ranging from 30 to 60 mm in maximum length. Flint sourced from the Phosphates Plateau in the hinterland of the Meseta was available in secondary deposits near the site (Fernandes et al. 2016). Detailed analysis of the artefact raw material and of the pebble cortex from ThI-L1 suggests that the knapped pebbles were derived from locations that were once submerged under sea water. This means that hominins most likely collected them from beaches or in adjacent secondary deposits.

Table S1. Categories of the silicite assemblage of ThI-L1.

Categories	***N***	***%***
Cobbles and pebbles with percussion marks	6	0.6
Cores	107	10.4
Core fragments	28	2.7
Flakes	175	16.9
Bladelet/like flakes	35	3.4
Broken flakes	46	4.4
Retouched flakes	3	0.3
Wastes	72	7.0
Total artefacts	***472***	***45.7***
Pebbles	534	51.6
Broken pebbles	28	2.7
Natural fragments	-	-
Total unmodified items	***562***	***54.3***
TOTAL	**1034**	***100.0***

Small flakes were produced from flint pebbles using some of the flaking methods documented for quartzite, such as unifacial unidirectional, bifacial partial, multifacial multidirectional. Free-hand knapping technique was frequently used (Fig. S2).

Besides, there is evidence of a specific technical process hitherto unknown for these periods which is an intentional production of recurrent bladelet-like flakes exclusively through a bipolar-on-anvil semi-peripheral exploitation (Fig. S3). Thirty-two cores (Fig. S3: 1-5) show one horizontal or slightly oblique split surface along the transversal axis of the pebble and percussion marks on the opposite side (Fig. S3: 3,4). The flat surface is appropriate to stabilize the half-pebble on the anvil (proximal portion) and strike the convex opposite surface (distal portion) with the hammerstone. The position of the striking surface (distal portion) and the split surface resting on the anvil stabilizing the core (proximal portion) remains stable during pebble exploitation. Core is rotated according to the longitudinal axis to exploit its periphery detaching bladelet-like flakes (Fig. S3: 6-14) and no orthogonal rotation of the core is operated.

Bladelet-like flake production of ThI-L1 seems to be episodic at the end of the Early Pleistocene and not followed by any further similar production. The first appearance of new technical strategies, though sporadic as the bladelet-like flake production at ThI-L1, is important not because it indicates more complex cognitive skills by itself, but because it demonstrates that technical behaviours were strongly diversified and that, when need arose, hominins possessed technical know-how to create new

solutions. Providing further data to the small flaking strategies, flint knapping from ThI-L1 well demonstrates that African Acheulean techno-economic strategies were much more flexible and diversified than the mere production of macro-tools can document (Gallotti et al. 2020).

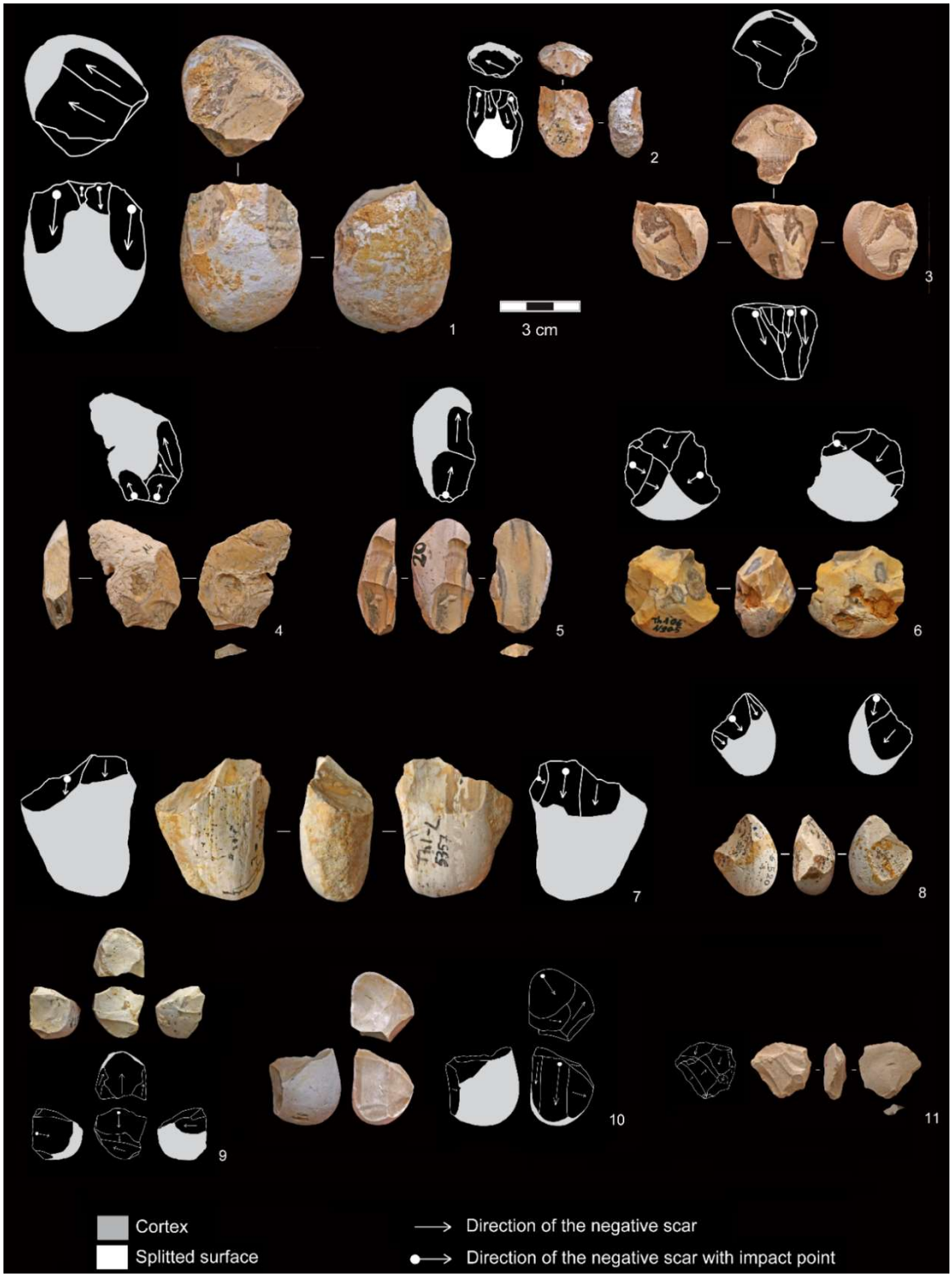

Figure S2. ThI-L1 silicite assemblage. Free-hand exploitation: 1-3: unifacial unidirectional cores with rectified striking platform; 4,5: flakes with unidirectional negative scars on the dorsal face; 6-8: bifacial partial alternating cores; 9, 10: multifacial multidirectional orthogonal cores; 11: hinged flake with multidirectional negative scars on the dorsal face.

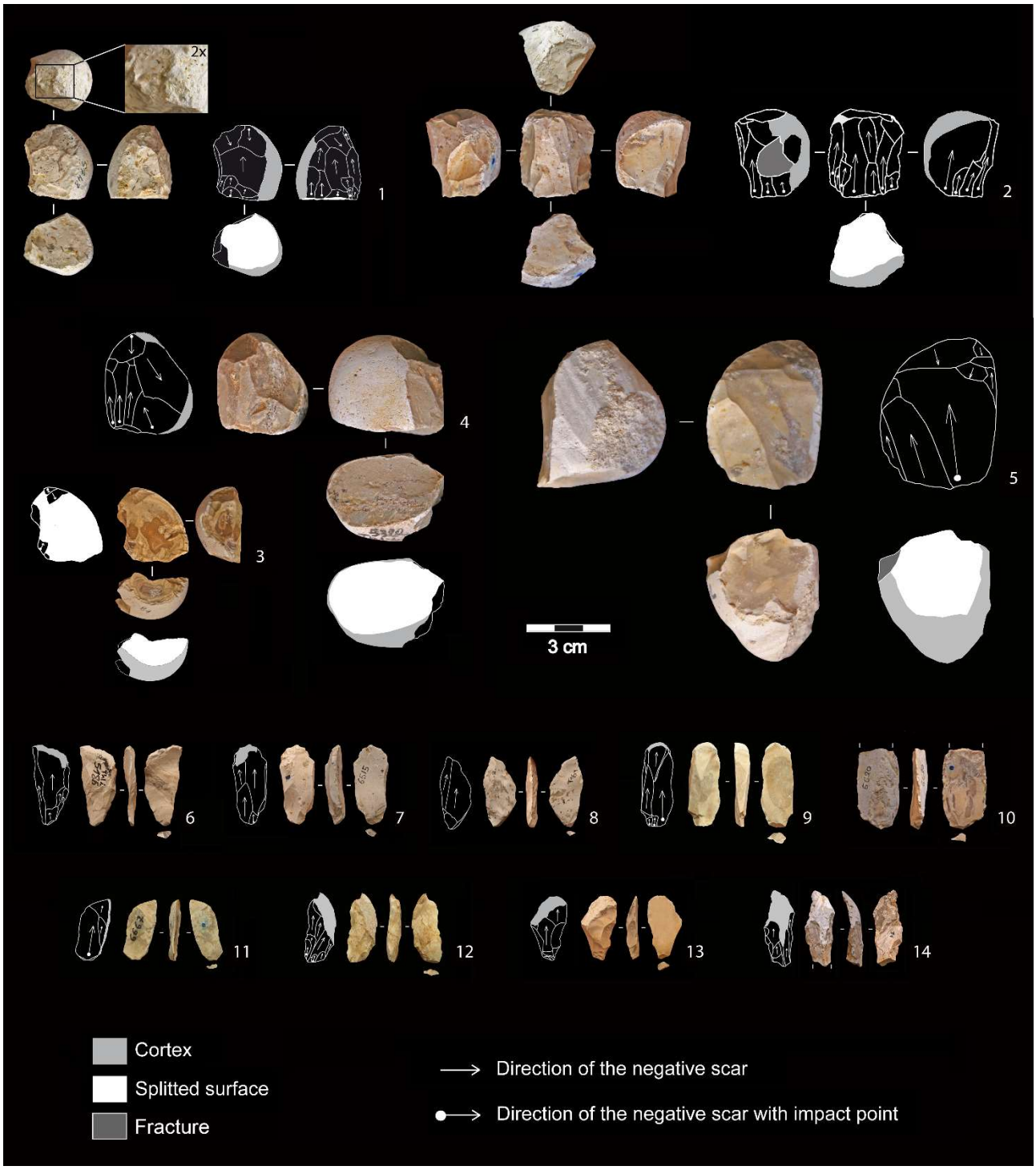

Figure S3. ThI-L1 silicite assemblage: 1-5) Bipolar-on-anvil semi-peripheral exploitation cores showing a split surface along the transversal axis of the pebble and elongated peripheral negative scars; 6-14) bladelet-like flakes.

References

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Gallotti R, Mohib A, Fernandes P, et al (2020) Dedicated core-on-anvil production of bladelet-like flakes in the Acheulean at Thomas Quarry I - L1 (Casablanca, Morocco). Sci Rep 10: 9225. https://doi.org/10.1038/s41598-020-65903-3.