II.11. Taxon Hf: Points on flake
(23 items; #904–926)

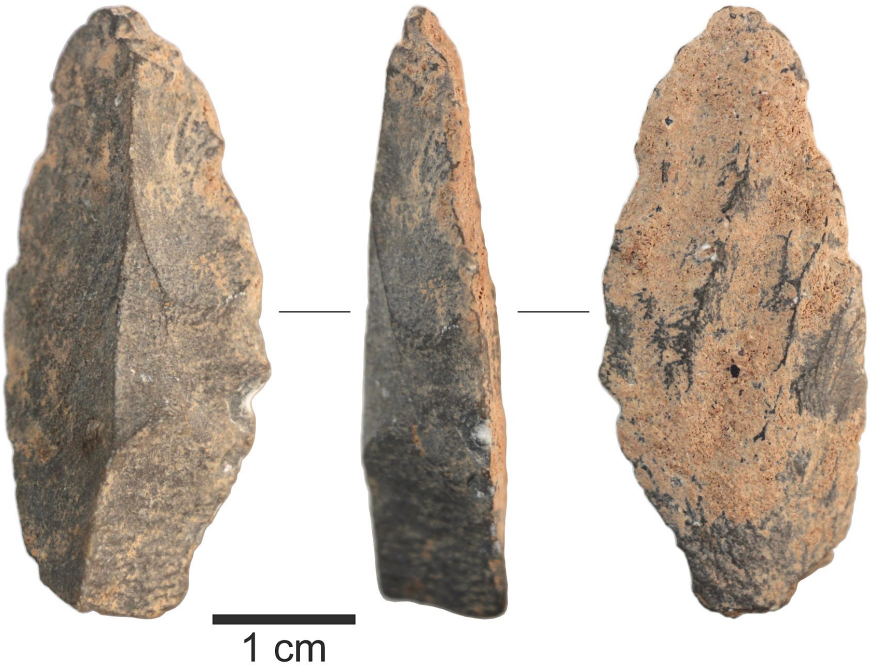
#904. Item no. 2250-17226

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	10/01/2019	A4-SW	6.40/ 6.35	6.37	283904.87	2724525.84	1604	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake	27.2	17.7	8	3.46	V		

Characterization. This artefact probably is the preform of a point on flake, completely coated by a thick layer of orange-brown sediment on both faces. A recent damage to an edge reveals the raw material is fine-grained green limestone. The type of the original flake cannot be established anymore. One of the sides shows multiple overlapped extraction flakes aimed at thinning the artefact, while the other side reveal at least one thinning removal, meaning that the item was approached through a partially bifacial technique. The base is angular and relatively thick. The item shows good lateral symmetry.

#905. Item no. 3026-17291

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	20/01/2019	B1-NW	-	6.47	283905.69	2724523.45	1604	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake	43	19	9.9	6.94	V		



Characterization. This artefact is a presumable point on flake (for which reason the blade is depicted with the proximal oriented downwards), made on a tall-ridged corner blade extracted from a tabular core of fine-grained green limestone. The platform is broken, probably collapsed under impact. The ventral side is rugged and covered by sediment depositions. After its extraction as a primary debitage item, the corner blade was thinned by percussion across its left half only (here shown as right half), while the right half was left untouched, preserving the natural flat surface. The result is a symmetrical object with a possible function as a point.

#906. Item no. 3055-17298

Exc. nr.	Discovery date	Square -subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	20/01/2019	B3-SE	-	5.99	283906.27	2724524.58	1604	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake	25.6	19.4	4.9	2.59	V		

Characterization. This tear-dropped artefact is a presumable point on flake, made by marginal retouch on a primary (cortical) flake of pale-green limestone, with its surfaces eroded and the dorsal-right and ventral sides covered by cemented carbonate depositions that indicate direct contact with dripping from the ceiling, which, in turn, suggests the item had been left exposed on the ancient surface before becoming buried. The right edge of the point or preform is thin, natural, left untouched. The left edge is shaped by steep percussion retouch that left a beveled margin behind. The basal portion reveals the results of thinning attempts originating from the proximal end, attempts that ended up in two marked hinge terminations at the end of flaking scars produced along natural sedimentation beds inside the limestone.

#907. Item no. 2345-17237

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	12/01/2019	B5-NE	var.	5.64	283906.17	2724527.39	1604	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake	28.7	14.5	5.4	2.66	V		

Characterization. This small laurel-leafed artefact is presumably a point on flake, made by minimal modification on a primary (cortical) flake of green limestone, with a red-brown-stained texturized dorsal side, and a ventral face covered by sediment depositions. The features are eroded or obstructed by coating. One edge is squarish (showed laterally, above), the other one is thin, trimmed into shape. The distal tip is missing. The basal end is convergent.

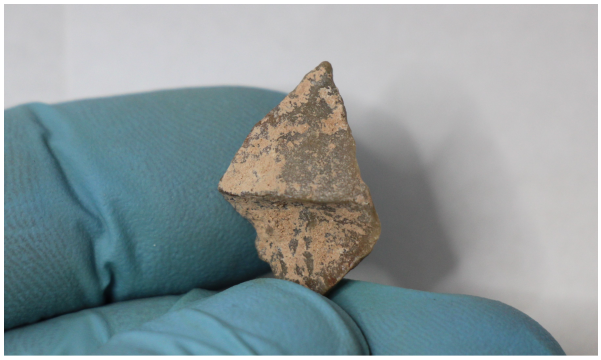
#908. Item no. 3788-17399

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	01/02/2019	B5-NW	-	5.77	283905.56	2724527.14	1604A	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf?	Point on flake?	35.8	21.4	7.7	5.92	V		

Characterization. This artefact is a possible preform of a point on flake, a modified fine-grained green limestone flake, with an altered morphology, difficult to reconstruct. The dorsal side of the flake, in the distal sector of the presumed point, shares its surface between a cortical area to the left and the scar of a concave previous extraction to the right. The proximal end of the point is also minimally shaped into a convergent termination. The entire right edge of the presumed point is also the effect of a coarse reduction approach. Fine sediment depositions coat both its sides.

#909. Item no. 2379-17241

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	12/01/2019	C4-NE	-	5.57	283907.27	2724526.12	1604/ 1604A	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Tip of point	22	14	6.3	1.14	V		



Characterization. This interesting and important item of fine-grained green limestone is the distal tip fragment of a finely-made projectile point, probably a point on flake, severed from the rest of the artefact by a large bending fracture that, in this case, represents the entire proximal segment of the fragmented piece. The

triangular and symmetrical tip was probably achieved by fine edge retouch, although the scars are not easy to notice anymore, due to erosion. One of the sides also presents a marginal longitudinal extraction. At hypothetical level, the fracture is consistent with the breakage that occurs when a projectile is removed from the body of the prey, extracting the shaft with the still attached basal fragment, while leaving the distal portion presumably stuck inside the flesh of the target. Projectile bases often return to the camp attached to their shafts, while the tips reach the camp inside the body of the prey.

#910. Item no. 3427-17351

Exc. nr.	Discovery date	Square -subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	23/01/2019	C4-SW	-	5.79	283906.88	2724525.74	1604A	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake?	31.8	16.6	8.9	3.90	V		

Characterization. This item is probably a point preform, made on a green limestone blank of an undetermined type (unclear whether a flake with a texturized cortical dorsal section or a small ovoid nodule). The piece is coated by a uniform layer of fine-grained sediment that obstructs some features. The artefact was shaped by partial bifacial approach. The basal end was

thinned. The piece shows lateral symmetry and dorso-ventral asymmetry. The identification as a point is not secure.

#911. Item no. 2675-17268

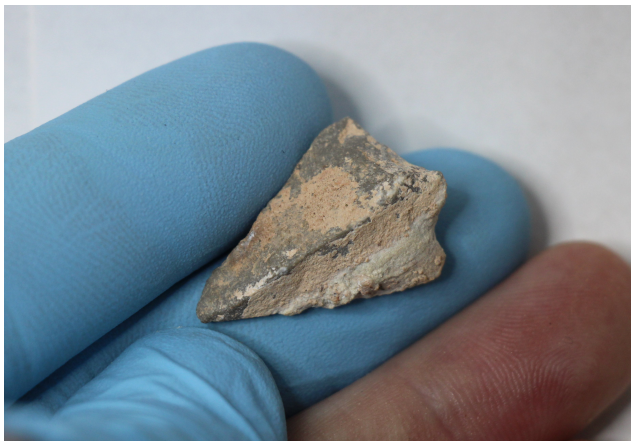
Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	17/01/2019	B5-NW	-	5.80	283905.88	2724526.99	1604A	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake	18.5	11	3.3	0.82	V		

Characterization. This small, oval, symmetrical item is a possible point on flake or point-like shape made by edge modification on a small flake, possibly a transversal one. The cemented sediment coating, covering the dorsal side, obstructs the appreciation of the blank as a tertiary or as other type of flake. The basal end is convergent, angular, made by controlled fracturing. Fine edge retouch was used to shape the two lateral convex edges. The true functionality of this item remains questionable.

#912. Item no. 2855-17282

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	18/01/2019	B5-NE	-	5.62	283906.27	2724527.16	1604A	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake?	25.4	16.9	9.3	2.73	V		

Characterization. This interesting artefact is a prismatic object made on the distal end of a blade core or on a prismatic nodule with longitudinal bladelet extraction scars. The item is presumably a point (or an attempt at one), hypothetically a point on flake, in the absence of a clearer assessment of the parent blank. However, the basal side of the presumed point was shaped by marginal retouch, obtained in the form of pressure-grinding on the edges, resulting in a micro-stem feature. The retouch scars are visible.



#913. Item no. 2568-17256

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	16/01/2019	C4-SE	-	5.62	283907.36	2724525.93	1604A	B

Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake	26.2	14.3	5.5	2.47	V		

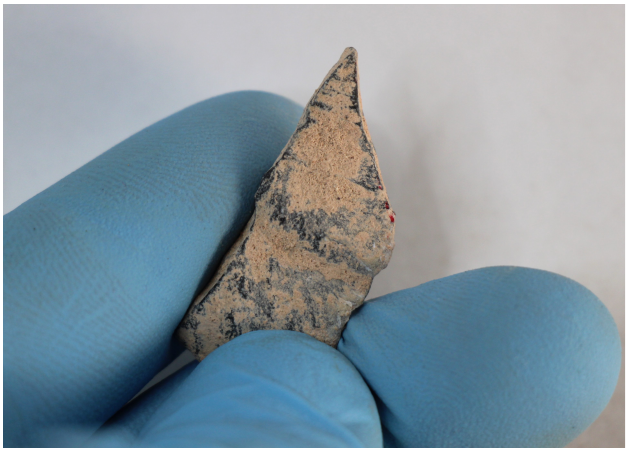
Characterization. This artefact is a point on flake or the advanced preform of one, made by edge modification on an uncertain type of flake of green limestone, heavily coated by cemented sediment depositions all around its surfaces. With a rounded and thinned base, it displays good lateral symmetry. Certain degree of bifacial approach is a possibility, considering the extraction scars on both faces, but the coating obstructs the adequate appreciation of the technological traits. As it occurs with most of the points on flake or transversal points, in this case too one lateral edge is thick, whereas the other one is thin. The distal tip remains at a preliminary stage of reduction.

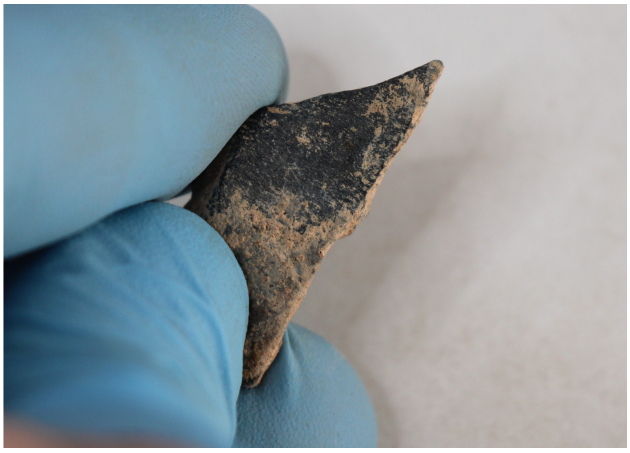
#914. Item no. 3504-17364

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	28/01/2019	C4-SE	-	5.75	283907.13	2724525.58	1604A	B

Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		

Hf?	Point on flake?	29.4	12.8	5.2	2.12	V(b)		





Characterization. This item is a possible point on a modified flake of black limestone, obtained by edge fracturing. The nature of the blank is not evident; it may be a transversal flake. The long straight edge is produced by snapping the blank, while the other two edges are the result of abrupt percussion retouch.

#915. Item no. 3099-17301

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	20/01/2019	B3-SE	6.06/ 6.00	6.03	283906.22	2724524.69	1604A/ 1605	B

Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hi	Point on blade termination	29.9	13.1	7.7	2.64	V		

Characterization. This elongated triangular item is a possible point made by minimal modification on a blade distal termination, with a triangular cross-section and a thick proximal end visibly conformed by an irregular fracture plane. The edges of the blank were minimally retouched into the pointy distal end. The ventral side is dominated by an intrusive calcite plane, indicating that the blank had separated along a natural weak zone of intrusive impurities.

#916. Item no. 3794-17400

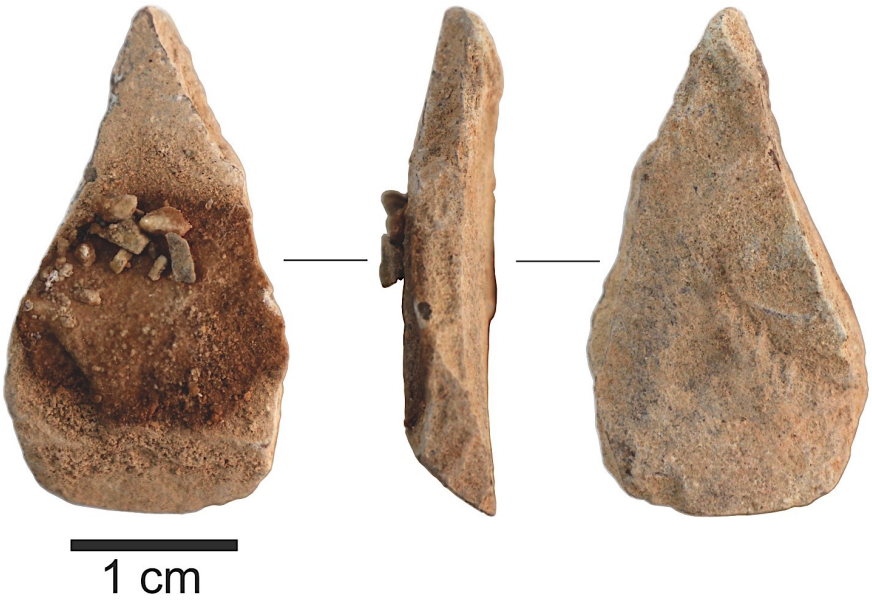
Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	02/02/2019	B5-NW	-	5.75	283905.79	2724527.15	1604A/ 1605	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
HL, Hf?	Point on plaquette	31.1	16.2	5.1	3.03	V(b)		

Characterization. This artefact is a point, either a point on plaquette or a point on a flake of black limestone. The flat blank does indicate a plaquette or lamina, but the texture difference

between the two faces also supports the hypothesis of a flake, probably a transversal flake. The right-distal edge of the point is a natural flat surface, forming a larger-than-90 degrees angle with the flat, cortical dorsal side. The right-proximal segment was modified by retouch, similar to its symmetrically corresponding segment on the other side. The left-distal edge is the result of edge trimming. The result is a fine, laterally symmetrical point or point-like shape.

#917. Item no. 3890-17407

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	03/02/2019	B5-SW	-	5.76	283905.90	2724526.57	1604A/ 1605	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake	30.5	17	6.2	3.29	V		



Characterization. This artefact is an interesting, peculiar, simple, but finely made projectile point on flake, manufactured on a thick, almost tabular flake of green limestone, completely coated by orange-brown fine-grained sediment depositions. The piece had been exposed to ceiling dripping while resting on the ancient surface, as shown by the darker mineral stain on the dorsal side, completed with visible sand grains cemented by dripping. The overall aspect, at a first glance, suggests a point on plaquette, but, in reality, the blank is a transversal flake, whose original attributes are difficult to assess at this stage. The point (or advanced preform) was made by controlled flaking and fracturing of the edges. One edge (the thicker one) was shaped longitudinally by burination. The other edge (the thinner one) was obtained by three consecutive fracture planes. The result is a fairly symmetrical point, with a well-defined distal tip, apparently highly functional and potentially lethal, despite the squarish shape of the converging edges.

#918. Item no. 4166-17432

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	12/02/2019	C4-NW	-	5.53	283906.96	2724526.46	1604A/ 1606	B

Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake	30.3	18.3	10.8	4.61	V		

Characterization. This item is the preform of a point on flake, heavily coated by cemented muddy carbonate sediment, mainly on the dorsal side. The morphology suggests this was originally a transversal flake with a wide, thick platform, but the relative convexity of that surface and the lack of clear impact-related features on the ventral side make this theory insufficiently sustained. Whatever its extraction procedure was, the blank shows clear evidence of bifacial reduction, visible enough on the thinner edge.

#919. Item no. 4183-17437

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	12/02/2019	C5-SE	-	5.40	283907.24	2724526.84	1604A/ 1606	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake?	25.9	14.8	6.2	1.92	V		

Characterization. This artefact is, probably, a projectile point on flake, obtained by the simple bifacial modification of a tabular blank. The edge that presents flat marginal surfaces has an almost rectangular cross-section, with two flat planes meeting at an angle slightly lower than 90º, suggesting the blank was a tabular piece, probably a squarish flake or lamina, instead of a regular thinning flake. The two faces were thinned by extracting longitudinal, invasive flakes that removed most of the original thickness from the sides; each face was thinned by removals coming from opposite directions. However, the origins of the morphological features of the item remain questionable.

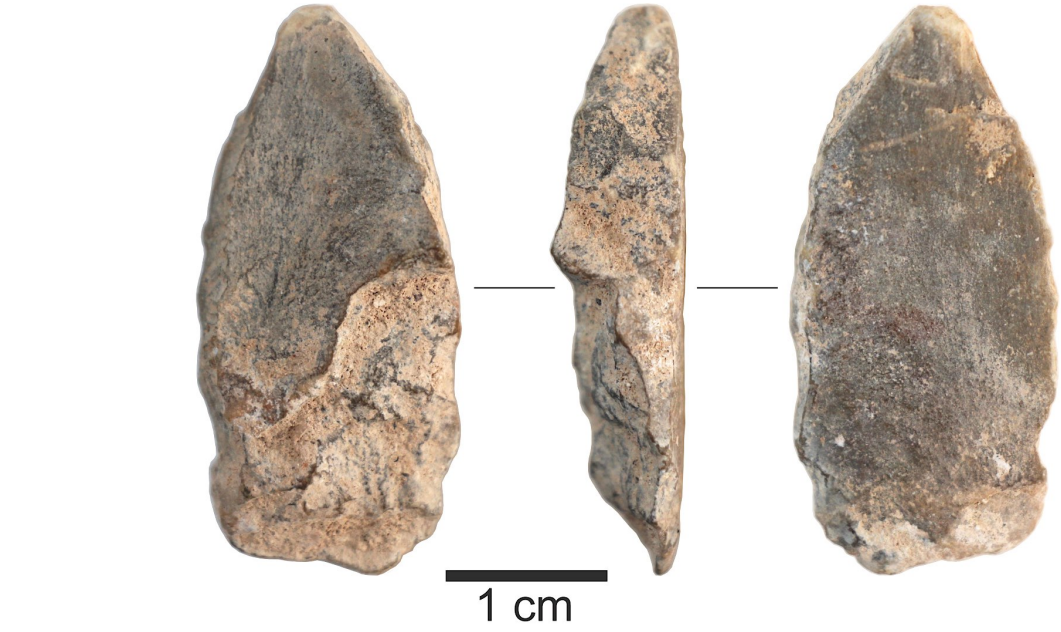
#920. Item no. 3316-17338

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	23/01/2019	A6-NW	-	5.80	283904.78	2724528.10	1605	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake	22.6	10.3	4.6	0.82	V		

Characterization. This small, thin item is a possible point on flake, made by edge modification on a tertiary green limestone flake, apparently a transversal one. The contour of the presumed micro-projectile was achieved by abrupt percussion or controlled fracturing applied to the edges of the blank, resulting in the laterally symmetrical shape with a markedly pointy distal tip. If such small items were indeed confirmed as projectile points, an interesting possibility exists that bow-and-arrow or similar technologies were in use.

#921. Item no. 3439-17355

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	21/01/2019	A6-NW	5.77/ 5.73	5.58	283904.99	2724528.75	1605	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake	35.4	16.7	7.9	5.29	V		



Characterization. This artefact is the preform of a point on flake, obtained by the marginal and invasive modification of a relatively thick longitudinal flake of fine-grained limestone. The smooth ventral side does not keep clear indicators of that aspect, either. The distal tip of the preform reveals the presence of a rounded, ground platform, a possibility supported by the presence of two *eraillure* scars on the ventral proximal side. The right edge of the preform is a thick faceted edge, which was utilized as a platform for several (apparently four) consecutive

flake extractions invading the dorsal-proximal side of the presumed point, employing the widespread “square-edge management” technological approach. The features from this area are infilled by posterior sediment depositions. This is a partial attempt to thin both the dorsal and basal areas of the preform. The left convex edge of the preform is also the result of percussion retouch.

#922. Item no. 3357-17343

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	23/01/2019	B5-SW	-	5.81	283905.70	2724526.96	1605	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake	34	13	5.1	2.15	V		

Characterization. This is an interesting artefact manufactured on a modified blade of green limestone, with a stemmed shape and a biconvex cross-section, with eroded surfaces and a thin cover of fine-grained sediment. The blank was edge-trimmed into a laurel leaf shape,

which was later further modified, also by percussion and edge trimming, creating two opposite wide shallow notches that gave the point its final composite, stemmed form. This item has a unique shape, and may form a category of its own, although its general functionality is presumed to be a projectile point prepared for hafting.

#923. Item no. 3476-17359

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	28/01/2019	B5-SW	-	5.77	283905.79	2724526.49	1605	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		

Hf	Point on flake	29.9	13.7	4	2.02	V		

Characterization. This artefact is a possible point on flake or a point effigy, made by the edge modification of a flat flake of green limestone, coated by a thick layer of orange-brown sediment on both sides. The thick coating obstructs the appropriate evaluation of the features. One edge is square and convex, the other one is thinned, whereas the platform is no longer visible.

#924. Item no. 4015-17418

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	06/02/2019	C4-SE	-	5.66	283907.06	2724525.83	1605	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
HL? Hf	Point effigy? Point on flake?	28.7	14.3	5.2	2.26	V		

Characterization. This interesting artefact is either a point effigy or a functional point made by edge modification on a flake of green limestone, coated by fine-grained sediment patina. The

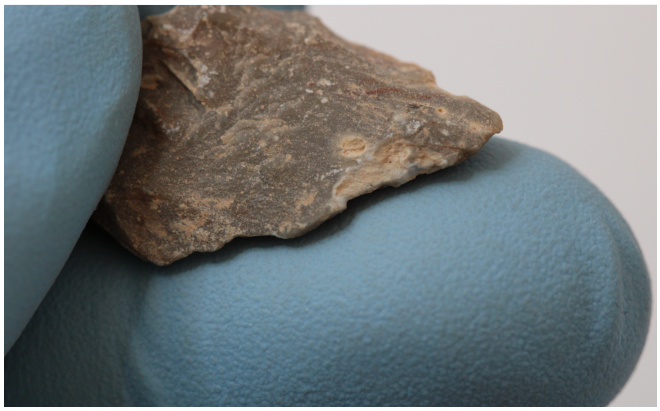
differences between the two faces clearly show that the blank was not a lamina or plaquette, but a flake, presumably a transversal flake, although the features cannot be assessed properly. The dorsal side of the blank is flat, indicating a tabular parent core. The ventral side is rugged, irregular, convex. Its converging edges were both produced by fracturing or abrupt percussion. The basal area is also convergent, with minimal percussion retouch as well. The result is a remarkable laterally symmetrical point or point-like shape.

#925. Item no. 3540-17373

Exc. nr.	Discovery date	Square -subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	28/01/2019	B1-SE	-	6.43	283906.50	2724522.62	1607	B
Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		

Hf	Point on flake	27.7	15.1	5.7	2.20	V		

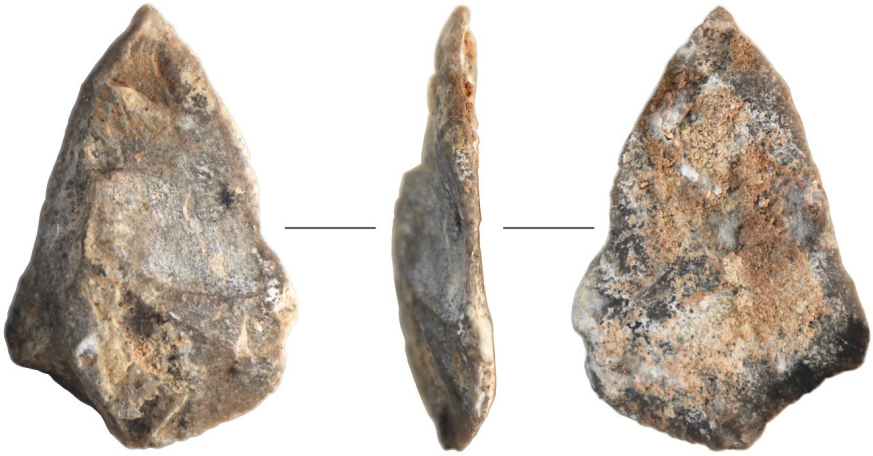
Characterization. This artefact is a point on flake or an advanced point preform, made by edge retouch on a longitudinal tertiary flake of green limestone. The flake had a strong, wide, faceted platform, and it was retouched bifacially, in the sense that each lateral edge sees marginal, non-invasive reduction percussion scars forming over opposite faces. The result is a functionally feasible shape, suitable for a point.



#926. Item no. 3525-17369

Exc. nr.	Discovery date	Square-subsq.	Depth range Z(D)	Depth Z(datum)	UTM E (x)	UTM N (y)	Stratum	Stratig. comp. (SC)
X16	28/01/2019	C2-NE	-	5.91	283907.15	2724524.05	1607/ 1608	B

Taxon code	Taxon definition	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material class		
Hf	Point on flake	24.6	16.2	4.8	1.45	V		



1 cm

Characterization. This artefact is a possible point on flake, a small tertiary flake of green limestone, edge-trimmed into shape. Despite the shape, with a panhandle-like form protruding out of the contour, the blank is not a transversal flake, but a longitudinal one. The entire distal section was evidently modified by retouching the converging edges into a sharp, pointy distal tip, compatible with a function as a projectile point. The flat ventral side is coated by a thick layer of cemented carbonate sediment.