GUADALUPE BIFACES FROM FRIO AND MEDINA COUNTIES , TEXAS

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ABSTRACT

Guadalupe bifaces from sites in the drainages of the San Miguel and Hondo Creeks in Medina and Frio Counties, Texas are documented and illustrated.

DISTRIBUTION

The Guadalupe biface is an Early Archaic artifact found largely south of the Balcones Escarpment between the Rio Grande and Guadalupe Rivers (Turner and Hester 1985). Two possible Guadalupe bifaces were also reported farther north in Hamilton County (Turner and Schrank 1992).

The artifact was reported by Hester and Kohnitz (1975) at the Granberg II site in stratigraphic context with Early Archaic or Pre-Archaic occupations. A radiocarbon date of 3600-3400 B.C. was obtained.

All specimens in this report came from sites that are in a transition zone between the Balconian and Tamaulipan Biotic Provinces (Blair 1950).

TOOL DESCRIPTION

The Guadalupe biface is a tool form unique to Central and South Texas. A thick, percussion- knapped artifact, its abruptly truncated distal end distinguishes it from other distally beveled stone tools. The Guadalupe bifaces' truncated bit angles from the dorsal rather than the ventral surface. Bit facet angles are generally steep, ranging in this report from 40-80 degrees. The proximal end is usually much more narrow than the distal end, many times almost to a point. In cross section, the tool usually has a very pronounced "humpbacked" appearance.

The function of the Guadalupe biface has yet to be determined. They are thought to be a wood- working tool, and a study by Brown (1985), suggests the damage to the distal bit end of most Guadalupe bifaces can best be explained as wear caused in working against a hard wood, such as mesquite (see Figure 1). Brown does point out that hinged flakes on the distal bit may simply be resharpening attempts.

Sollberger and Carroll suggest that these tools were suited as defleshing instruments (Sollberger and Carroll 1985:21-22). The author, having "fleshed" many hides, can readily see how the Guadalupe biface would make a very effective "flesher," as illustrated by Sollberger and Carroll (1985), even without hafting (see Figure 2).

STUDY AREA

Artifacts reported in this paper were surface- collected from sites in the drainages of Hondo and San Miguel creeks. The San Miguel Creek's headwaters, the Francisco and the Chacon Creeks, originate directly on the land form that divides the Medina River drainage from the Frio River drainage between Castroville and the small community of Quihi. Both tributaries and the San Miguel itself drain areas with enormous lithic resources. The San Miguel empties into the Frio River in McMullen County.

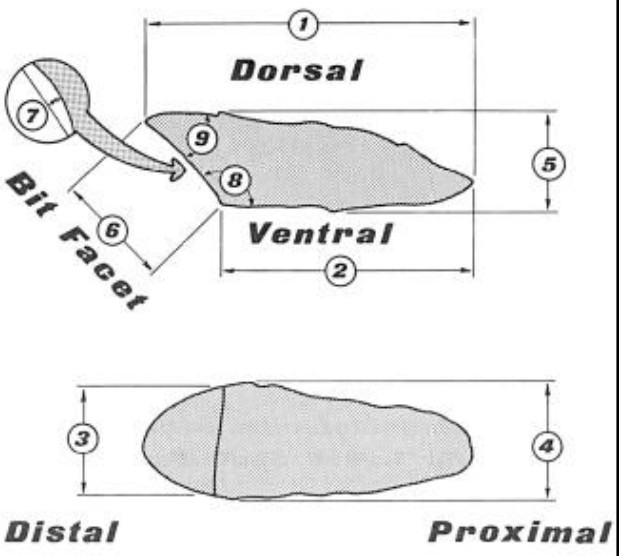

Figure 1. Landmarks and measurementson a Guadalupe tool. Numbered measurements correspond to those defined in Table 1.
①dorsal length; ②ventral length; ③maximum bit width; ④maximum tool width; ⑤maximum tool thickness; ⑥bit thickness (e.g., distance from bit apex to intersection with ventral face); ⑦maximum depth of bit concavity (the maximum amount of "dishing" of the bit facet, usually just a millimeter or two); ⑧bit facet/ventral angle; ⑨bit split-plane angle (working edge angle). (Used with permission of the Texas Archaeological Society, from Brown 1985).

Figure 2. Author's suggested usage of the Guadalupe tool. (Drawing by David Calame, Jr..)

Hondo Creek drains directly off the Balcones Escarpment in northwest Medina County, originating near the town of Tarpley. While Hondo Creek is a much larger and deeper drainage than San Miguel Creek, high quality lithics are scant in Hondo Creek above the point where this creek cuts through the Midway Group Fault Block in central Medina County (Brown, 1985). The author personally knows of several lithic quarries where high grade materials are available within the drainage of Hondo Creek; however, very little of this material actually shows up in the gravels of Hondo Creek. Hondo Creek empties into the Frio River in northwest Frio County.

DESCRIPTION OF SITES

41FR34 - Upland site approximately one mile east of San Miguel Creek and approximately two miles south of the northern Frio County line. The site is on a high point for the area, at 610 ft. above sea level, while San Miguel Creek one mile due west is at 570 ft. above sea level. The site has a commanding view of the San Miguel Creek valley.

A variety of archaic and late prehistoric projectile points and stone tools have been surface-collect-ed from the site including Andice/Calf Creek, Bulverde, Edwards, Frio, Montell, Palmillas, Pedernales, Perdiz, Scallorn, Tortugas, and one possible Midland points; in addition, one bison tooth and a mano as well as some fragments of an unidentified species of mussel shell have been found. Very little evidence of snail shells exists and burned rock is very sparse. However, very small, well-ground pieces of red ochre are common. The site is now in coastal pasture. Although 7 Guadalupe and 5 Guadalupe-like bifaces have been collected from this site, only 2 Clear Fork bifaces and 1 Nueces biface have been found at this site. Guadalupe biface Specimen (Sp.) Nos. are 360, 871, 872, 873, 875, 879, and 899.

It should be noted that 41FR34 is on the author's property and therefore, a much more thorough survey of the site has been made. In addition, the site is approximately 1 mile east of San Miguel Creek and at least 1.5 miles from the nearest farm-to-market road. It is believed the site was previously unknown and therefore collecting has been minimal at worst.

41ME87 - Open campsite on the first terrace of Hondo Creek on the north side of the creek in south Medina County. This site has tremendous amounts of burned limestone clast in the site deposits. Great amounts of human energy were expended transporting this limestone from nearby Hondo Creek. This burned limestone is spread across much of the site, perhaps encompassing 25 acres, but a concentration exists at the highest point of the site. Interestingly, at the high point, an area perhaps one hundred feet square retards the growth of veg-

etation and leaves all vegetation with a sickly yellow appearance. Four test holes were excavated at the site. One at the center of the site's high point, was sunk to a depth of 32 inches (ca. 80 cm) before a sterile layer was encountered. An Edwards point was found in screenings from the surface and a Montell point was found from screenings coming from an 18-inch level, 6 inches below the plow zone. Very nearly half the material excavated was burned limestone and a significant portion was chert chips and unidentified snail shells. Below the 18-inch level, the excavations encountered only a sterile zone containing a smaller species of snail. The soil excavated from the sterile zone was flood silt, and an earlier horizon very well could exist below this layer. Two backhoe test holes were excavated several hundred yards to the south of the first. The first of these encountered a hearth feature within the plow zone and both encountered large amounts of burned limestone and chert chips. A fourth test pit was excavated by use of a backhoe several hundred yards east of the site high point. Two prehistoric arrow points, a Scallorn and an Edwards, were encountered in the upper zone, and burned limestone and chert chips were excavated to nearly four feet. The fourth test pit was excavated in an area of the site that is believed to have never been cleared of brush. Artifacts collected include Abasolo, Baker, Bul-verde, Castroville, Catan, Edwards, Ensor, Fairland, Frio, Marcos, Martindale, Montell, Pedernales, Perdiz, Scallorn, and Tortugas points. One Guadalupe (Sp.916) and two Clear Fork bifaces were surface-collected during the initial site survey. Additional information on land owner collections was unavailable as of this report

41ME97 - Open campsite on the southern tip of the first terrace out of the floodplain of Francisco Creek. Artifacts collected from this site include Edwards, Langtry, and Perdiz points, 1 Guadalupe biface (Sp. 372), 1 Clear Fork biface and various other untyped scraping or cutting tools.

41ME102 - Open campsite on the first terrace out of the floodplain and in the floodplain of Francisco Creek in south central Medina County. Artifacts found at this site include Catan, Edwards, Pedernales, Perdiz, and Tortugas points, as well as some failed preform bifaces and some Leon Plain potsherds (Anne Fox, personal communication 2000). One Guadalupe biface (Sp. 697) and 1 Clear Fork biface have been collected from this site.

41ME102 - Open campsite on the first terrace above the floodplain and in the floodplain of Francisco Creek in south central Medina County. Artifacts found at this site include Catan, Edwards, Pedernales, Perdiz, and Tortugas points, as well as some failed preform bifaces and some Leon Plain potsherds (Anne Fox, personal communication 2000). One Guadalupe biface (Sp. 697) and 1 Clear Fork biface have been collected from this site.

41ME103 - Open campsite in Francisco Creek floodplain on the west side of the creek in south Medina County. The site is protected to the north by a high bluff along the creek and sits in a wide floodplain totaling perhaps 25 acres. The north end of the site has produced the more recent artifacts, while the south end of the site, farthest away from the protective bluff, has produced mainly archaic artifacts. A portion of this site actually sits on the east side of the creek at the south end, where a ranch road now crosses the creek. A cattle trail coming out of the creek going east has created an erosional gully nearly three feet deep where many chert flakes are visible. Just to the south of this cattle trail, perhaps fifty feet, is an accumulation of chert debris and may be a knapping station. This feature is exposed by recent potholes. Artifacts collected include Castroville, Frio, Langtry, Matamoros, Pedernales, Perdiz, Scallorn, Tortugas, Uvalde, and Williams points, gravers, and some Leon Plain potsherds (Anne Fox, personal communication, 2000), 8 Clear Fork bifaces, and 1 Guadalupe biface (Sp. 671). This site has produced many unidentified scraping tools.

Field Site # 008 - Open campsite on the first terrace of Francisco Creek on the west side of the creek in south Medina County. Very few snail shells were visible, but burned rock is plentiful. No test holes were excavated to determine deposit depths. Artifacts collected include Castroville, Carrizo, Fairland, Perdiz, Scallorn, Tortugas, and Uvalde points, 1 Clear Fork biface, and 1 Guadalupe biface (Sp. 766).

Field Site # 024 - Open campsite on the first terrace of Francisco Creek on the west side of the creek in south Medina County. Very little burned rock was visible and the author did not notice any mussel or snail shells. Artifacts collected from the site include 1 Clearfork biface and 2 Guadalupe bifaces (Sp. 500, 159).

Field Site # 041 - Guadalupe biface (Sp. 915) found in gravel bar of Hondo Creek in south Medina County. This location is several miles downstream from the Lindner Cache site (Brown 1985). This artifact was obviously redeposited and its site of origin is unknown .

Field Site # 052 - Open campsite just out of Hondo Creek bottoms in Frio County. There is extensive evidence of burned rock which is visibly built up. No test holes were excavated to determine deposit depths, and no mussel or snail shells were visible This site has been heavily collected. Artifacts collected include two Clearfork tools and one Guadalupe tool (Sp. 501). No projectile points have been collected from this site

THE ARTIFACTS

(See Table 1 for dimensions)

The artifacts described in this report were all surface-collected from eroding context at sites reported by the author. Specimens per site are as follows:

41FR34 - Sp. 360,871,872,873,875,879,899
41ME87 - Sp. 916
41ME97 - Sp. 372
41ME102 (Field Site #004) Sp. 697
41ME103 (Field Site #007) Sp. 671

Field Site # 008 - Sp. 766
Field Site # 024 - Sp. 500,159
Field Site # 041 - Sp. 915
Field Site #052 - Sp. 501

DESCRIPTION OF THE ARTIFACTS

41FR34

Specimen 360 (Figure 3C) – made from a medium grade, greyish-brown chert. The left lateral edge to the dorsal spine, when viewed from the dorsal proximal end, is heavily stained rust, or some reddish–orange coloring which is assumed to be from plow damage. This specimen has a very prominent dorsal spine and no cortex remaining on the tool. The bit facet has a "hollowed out" look with few, if any, resharpening flakes. The edges normally flaked back to resharpen the bit appear battered instead. The ventral surface is relatively flat, except towards the proximal end of the tool, where it curves dorsally. Half of the bit surface is also stained reddish orange.

Specimen 871 (Figure 5, A) - Made of tan chert with greyish brown seams and inclusions. This tool shows extreme battering and is "lumpy" and uneven across the dorsal surface from flakes taken off the dorsal spine. The distal half is bulbous. The bit has been resharpened several times and resharpening flakes hinge at 1.1 cm. This specimen is so battered it is hardly recognizable as a Guadalupe tool at all, and is totally exhausted.

Specimen 872 (Figure 4, C) - Made of grey, fine-grained chert with small brown inclusions. The dorsal spine is flattened by a large resharpening flake that runs approximately two-thirds the length of the tool. The proximal end has remnants of a yellow cortex. Resharpening flakes hinge at 2.85 cm from the bit facet. Lateral edges show light to moderate battering. Some rust stains show evidence of plow damage. The bit was modified by the removal of one flake from the ventral distal surface creating a very pointed distal tip.

Specimen 873 (Figure 6,A) - Made of blue, fine- grained chert with coarser tan inclusions. It is rather small and appears to have been fully exhausted. The tan inclusions were very resistant to flaking and have left the tool with a lopsided appearance to the left when viewed from the dorsal proximal end. Bit resharpening flakes hinge at 1.5 cm on the distal dorsal spine. This specimen is totally exhausted.

Specimen 875 (Figure 6, D) - Made of medium grade, brown chert. Little remains of the bit, having been flaked back dorsally. The dorsal surface is flattened by a large flake that abruptly terminated the proximal end with an overshot. The ventral surface is rough and uneven and the lateral edges are extremely battered. The tool has a very blocky appearance and is completely exhausted.

Specimen 879 (Figure 6, B) - Made of high quality, rich brown, heat treated chert, covered with a light blueish–white patina. This tool has a slick, very waxy feel and appearance. The author has gathered many examples of chert of this same color and quality from central Medina and Uvalde Counties. The lateral edges are moderately battered. The tool was broken in the middle by a snap fracture. This tool appears to have endured more recent damage from plowing. The tool has a rounded appearance with little dorsal spine.

Table 1. Dimensions of Guadalupe tools found in Frio and Medina Counties.

Specimen	Dorsal length (mm)	Ventral length (mm)	Maximum bit width (mm)	Maximum tool width (mm)	Maximum thickness (mm)	Bit thickness (mm)	Maximum Depth of bit facet concavity (mm)	Facet/ ventral angle (degrees)	Bit spine-plane angle (degrees)
159	7.1	6.5	2.2	2.25	1.95	1.1	0	120	80
360	10.65	8.5	2.85	3.3	3.3	4	0.2	120	50
372	11.2	10.5	3.2	4	2.75	2.4	0.15	105	75
500	10.7	7.95	2.85	3.1	3.35	3.7	0.15	130	40
501	9.4	7.8	3.85	3.9	3.45	3.35	0	110	60
671	8.15	7	3.2	3.4	3.2	2.3	0	130	75
697	9.6	7.7	3.5	3.5	4	4.3	0	120	60
766	8.45	6.2	3.8	3.3	2.75	3.45	0.15	125	50
871	10.15	8.7	2.9	4.1	3.3	2.15	0	125	70
872	8.9	7.2	2.5	2.7	2.2	2.5	0	125	50
873	7.95	7.2	1.95	2.95	2.45	1.75	0	120	70
875	7.1	6.2	2.2	3	2.4	1.1	0	130	75
879	5.45	4.75	2.4	2.9	2	1.5	0.05	120	60
899	9.6	7.8	2.85	3.15	3.7	4.15	0.1	100	55
915	8.75	7.85	2.35	2.35	2.6	1.9	0.05	120	65
916	7.6	6.6	3	3.45	2.7	1.75	0.05	125	55
	①*	②	③	④	⑤	⑥	⑦	⑧	⑨

* See Figure 1 for circled number correlation

One flake taken from the bit on the dorsal surface has removed some patina suggesting a possible later reuse of this tool. Another flake taken from the bit, when viewed from the dorsal proximal side, runs along the total lateral edge, removing patina and exposing "new" surface, resharpening flakes terminate at 8 mm .

Specimen 899 (Figure 3, D) - Made of light brown, fine-grained chert with white inclusions. The dorsal spine has yellow brown cortex extending 36 mm from the proximal end towards the distal end. The dorsal spine is prominent but irregular. The proximal end is snapped off at 90 degrees from the dorsal ridge. The ventral surface is rough and irregular with a slight twist to the right at the proximal end in relation to the bit facet when viewed from the ventral proximal end of the tool. Bit resharpening flakes hinge at 10 mm from the bit edge on the dorsal spine The bit edge is very crushed all the way around.

41ME87

Specimen 916 (Figure 4, B) - Made of a high grade greyish-white chert. Some cortex remains on the proximal end of this tool. The tool is short and stubby and heavily battered. Resharpening flakes hinge and stack at 1.9 cm from the bit. The ventral surface is flat, except at the bit, where a flake to remove the bulb caused the tool to slant slightly.

41ME97

Specimen 372 (5, D) - This tool's chert coloring is indeterminate due to extreme patination, but appears to be blue-brown and is made of a coarse-grained chert. Although it is the largest tool reported, the bit end apparently broke off because of a flaw in the rock. This specimen may represent an unfinished tool or a failed attempt at forming a second bit facet from a longer tool. It is long enough, still, to have been reused, and it is not apparent why it was not. There is a slight battering along ventral lateral edges and a pronounced spine runs the dorsal length of the tool. The proximal tip may show some use wear.

41ME102

Specimen 697 (Figure 4, A) - Made of light brown, fine-grained chert. There is a slight amount of cortex remaining on the dorsal proximal tip. The final tip point is missing. The tool has a strong, very prominent dorsal spine and shows much battering along the ventral later edges. This tool's bit surface is the largest of this report. Resharpening flakes hide at 1.2 cm.

41ME103

Specimen 671 (Figure 5, B) - Made of a coarse, tannish-grey chert with grey inclusions. Cortex remains on the proximal tip and some on the dorsal spine. A large flake that removed one-third of the dorsal spine removed evidence of resharpening flakes. Lateral edges are heavily battered and iron stains from plow damage exist.

Field Site 008

Specimen 766 (Figure 3, A) - Made from a fine, high quality, brown chert. Very little dorsal spine exists and some cortex remains on the proximal end. This tool appears to be made of heat treated chert. Lateral edges are slightly battered. The bit has a rounded shape due to many successful resharpening flakes, most of which run out at 2 cm. A very light speckling of patina has accumulated on this tool, and a portion of the bulb of percussion remains.

Field Site 024

Specimen 159 (Figure 6, C) - Made of fine, high quality brown chert. Lateral edges are extremely battered. No cortex remains on this tool. The dorsal spine is prominent, but lopsided to the right when viewed from the dorsal proximal end—the result of a large resharpening flake that hinged past halfway to the proximal end. This tool is very small and heavily used to the point of total exhaustion.

Specimen 500 (Figure 3, B) - Made of blueish brown, fine-grained chert. Much of this tool's surface is covered with a white patina, as is common with Archaic artifacts in Medina and Frio Counties. The dorsal spine is flat and irregular and roundly pointed at the proximal end. No cortex remains on this tool, however, sub-cortex microfractures do remain 3.3 cm from the bit edge, on the dorsal spine. The ventral surface is straight and rounded, giving the tool a "spike" appearance. The bit is oval and edge resharpening flakes terminate at 2.6 cm from the bit. The tool is very battered on its lateral edges.

Field Site No. 041

Specimen 915 (Figure 4, D) - Made of a very hard, coarse, tan chert. The dorsal spine is prominent and has remnants of a white cortex. The lateral edges are heavily battered. Resharpening flakes stack at 2.2 cm. This tool is stream-rolled and has a smooth feel despite the coarse nature of the material.

Field Site No. 052

Specimen 501 (Figure 5, C) - Made of yellowish grey brown, fine-grained chert with yellow brown inclusions. A slight blueish tint runs up the dorsal spine. No cortex remains on the dorsal spine, but the microfractures just under the cortex are present, giving the dorsal spine a lumpy, irregular look. The dorsal spine dips sharply to the ventral surface on the proximal end. The bit facet is broad and squarish and concave. This tool was possibly resharpened only once. Resharpening flakes hinge at 2.4 cm on the dorsal spine.

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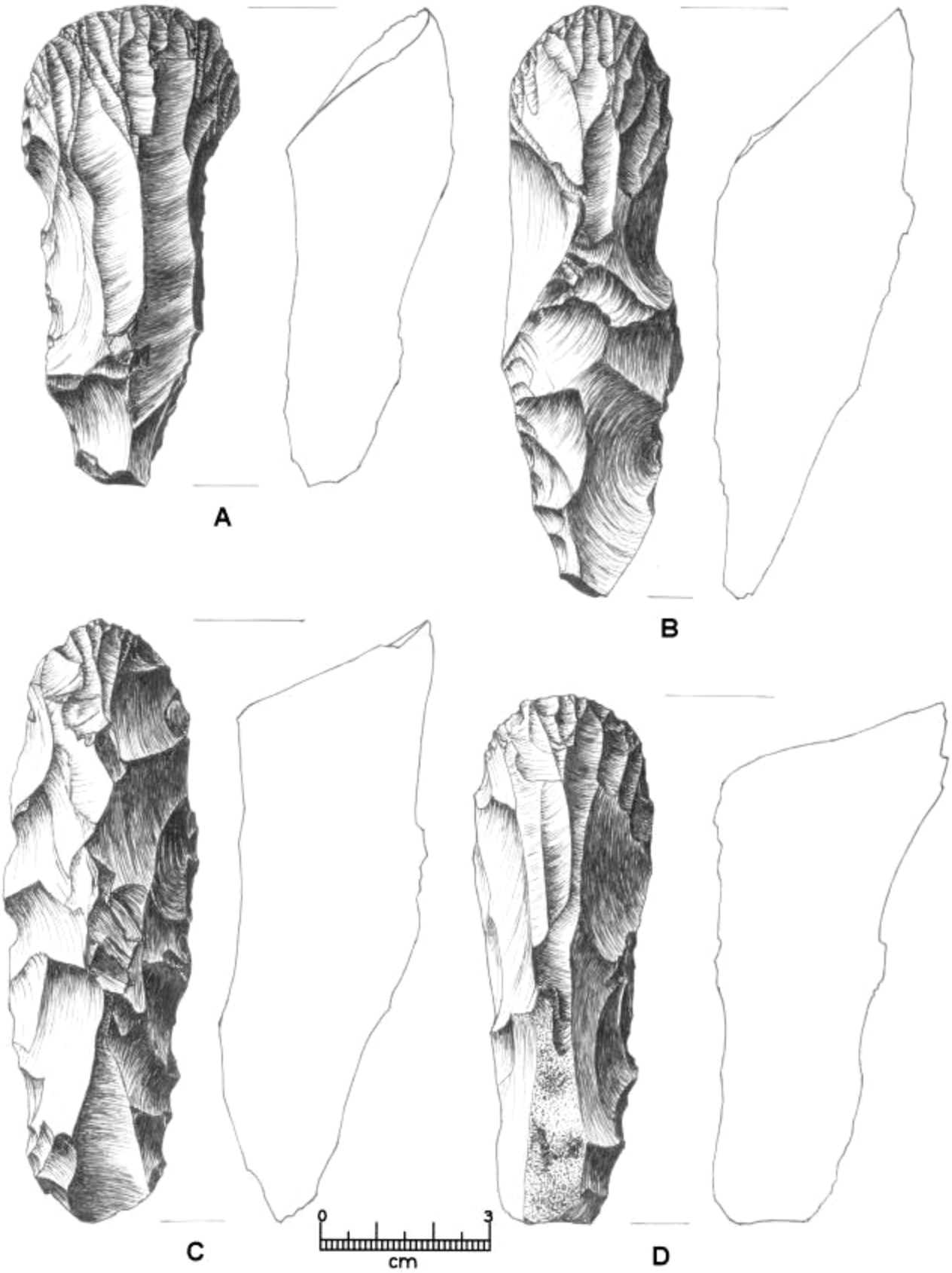

Figure 3. Guadalupe bifaces. A, Sp. 766 (FS #008, Medina County); B, Sp. 500 (FS #024, Medina County); C, Sp. 360 (41FR34); D, Sp. 899 (41FR34). Outlines are side views.

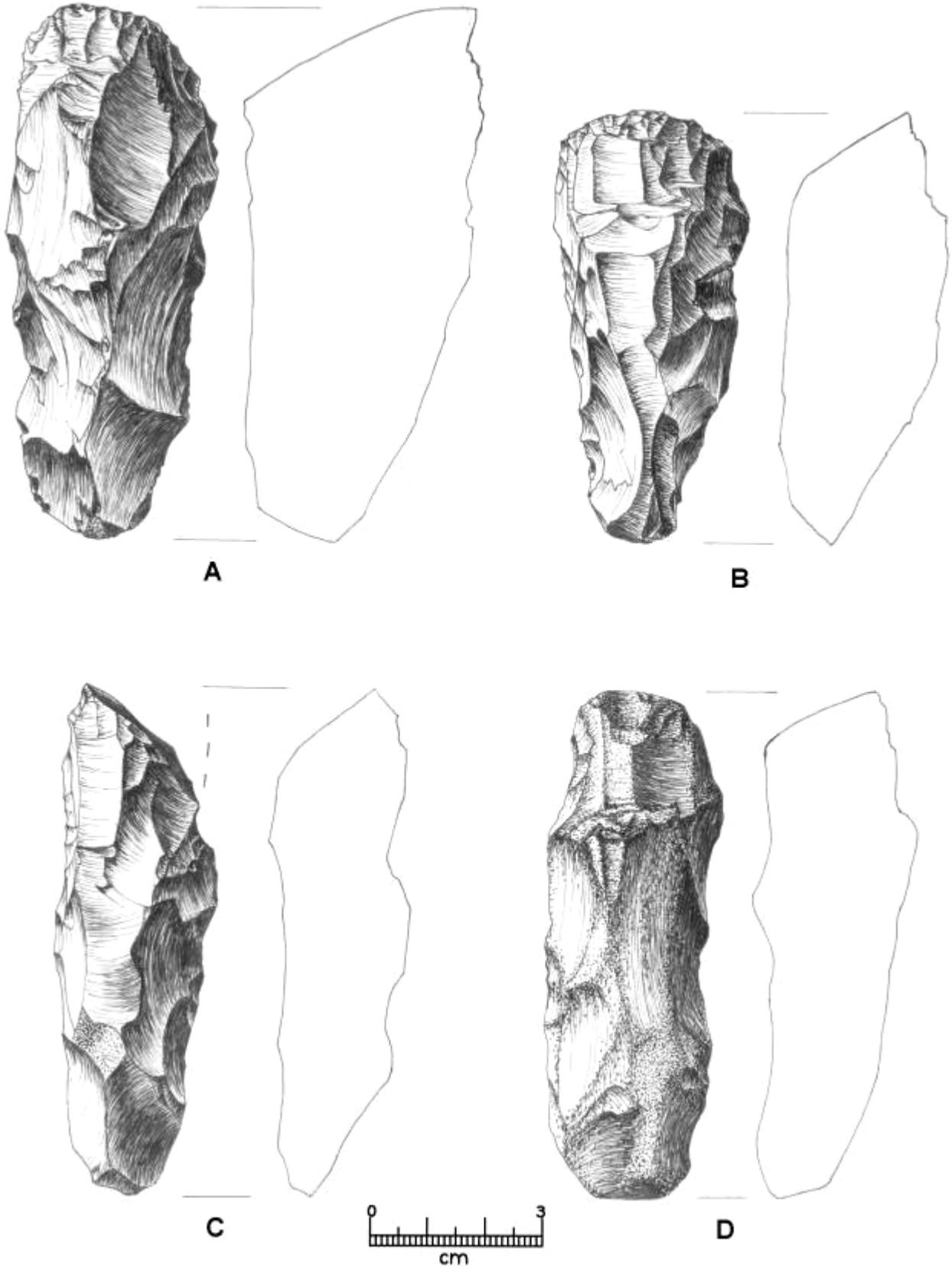

Figure 4. Guadalupe bifaces. A, Sp. 697 (41ME102); B, Sp. 916 (41ME87); C, Sp. 872 (41FR34); D, Sp. 915 (FS #041, Medina County). Outlines are side views.

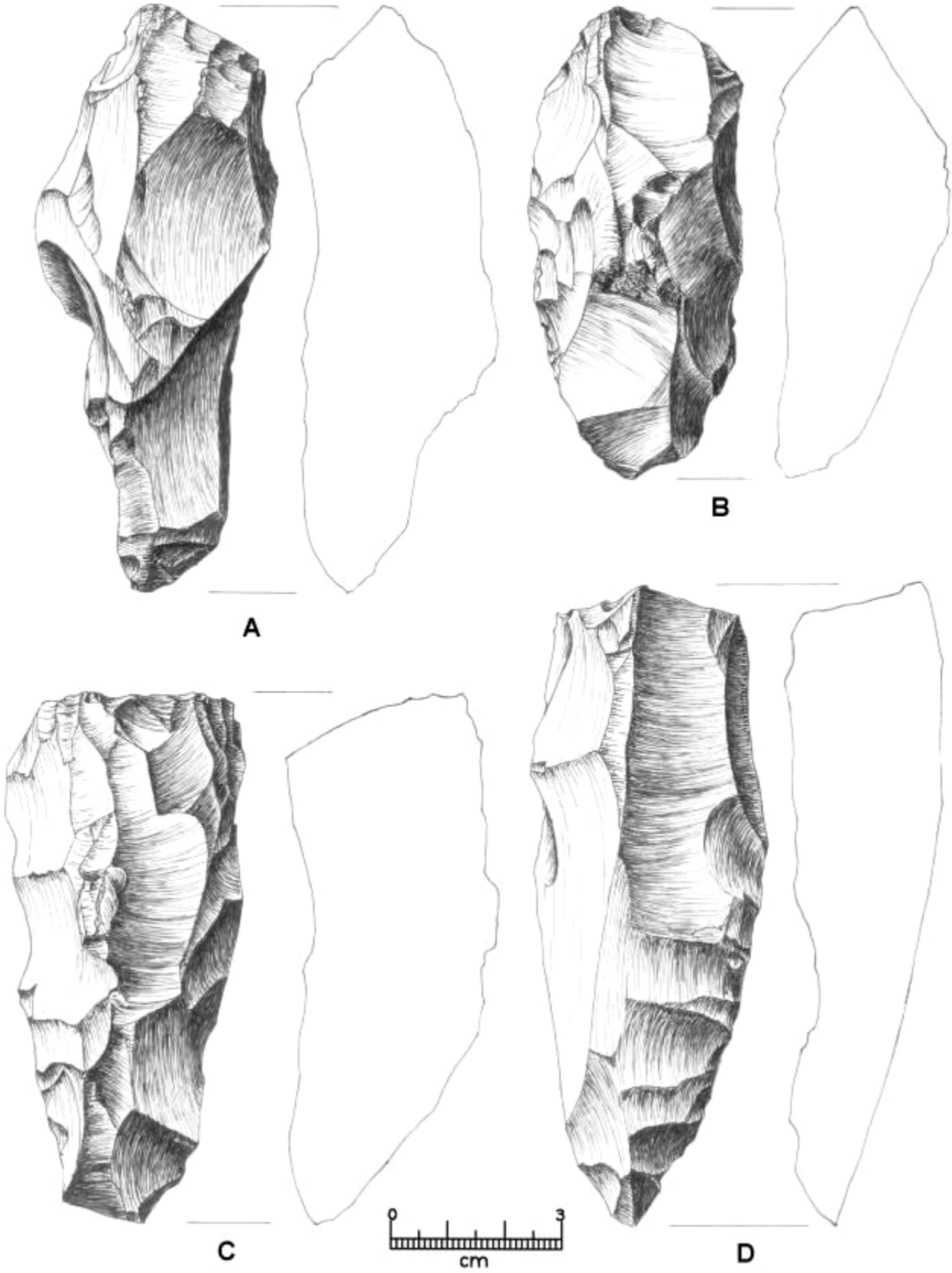

Figure 5. Guadalupe bifaces. A, Sp. 871 (41FR34); B, Sp. 671 (41ME103); C, Sp. 501 (FS #052, Frio County); D, Sp. 372 (41ME97). Outlines are side views.

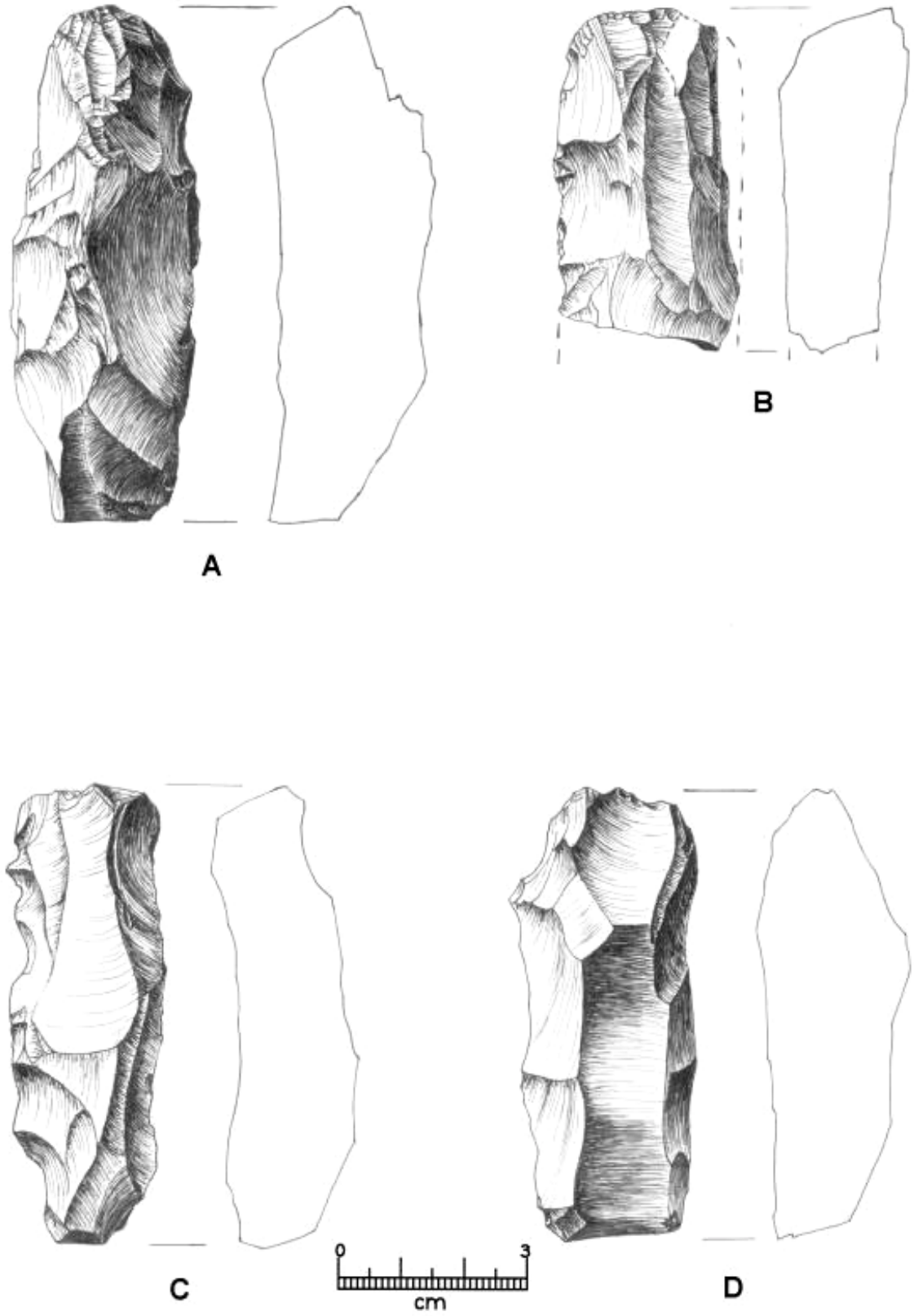

Figure 5. Guadalupe gouges. A, Sp. 873 (41FR34); B, Sp. 879 (41ME34); C, Sp. 159 (FS #024, Medina County); D, Sp. 875 (41ME34). Outlines are side views.