

Figure 11. Prehistoric study sample key-shaped formed unifaces from the Chilcotin region.

Specimen	(a): FiRs 1:361	(g): FiRs 1:3818
	(b): FiRs 2:539	(h): FiRs 1:4413
	(c): FiRs 1:1352	(i): FiRs 1:5340
	(d): FiRs 1:1587	(j): FiRs 1:5493
	(e): FiRs 1:2028	(k): FiRs 1:5699
	(f): FiRs 1:3496	(l): EkSa 13:3039

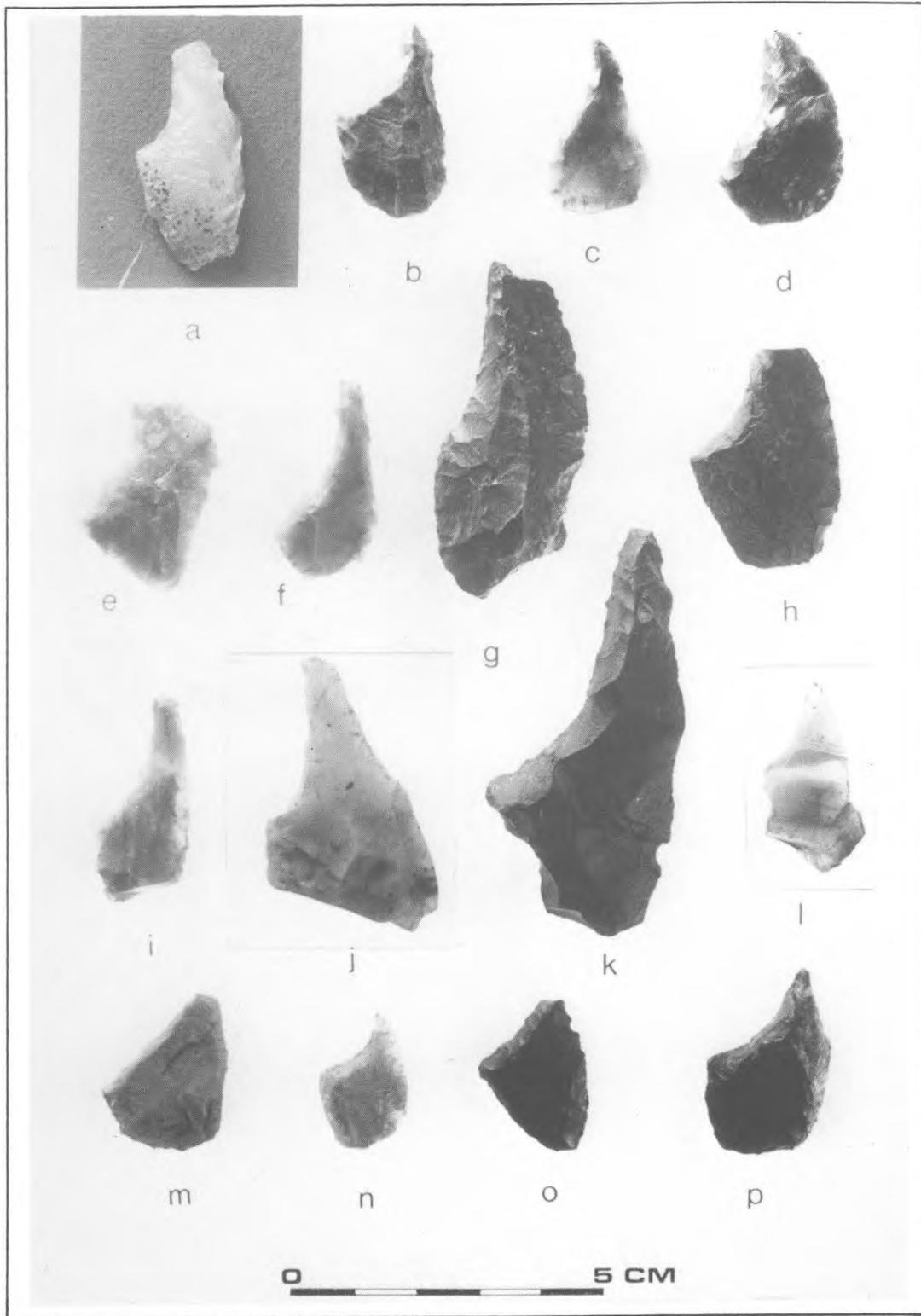


Figure 12. Prehistoric study sample key-shaped formed unifaces from the Mid-Fraser River region.

Specimen	(a): EbRj y:618	(g): EeRk 4:6-1043	(m): EeRl 4:364
	(b): EdRl 13:5	(h): EeRk 4:6-1124	(n): EeRl 7:1000
	(c): EeRk 4:1-51	(i): EeRk 4:19-1007	(o): EeRl 7:1107
	(d): EeRk 4:6-403	(j): EeRk 4:19-1253	(p): EeRl 91:7
	(e): EeRk 4:6-407	(k): EeRk 4:19-2119	
	(f): EeRk 4:6-462	(l): EeRk 4:20-372	

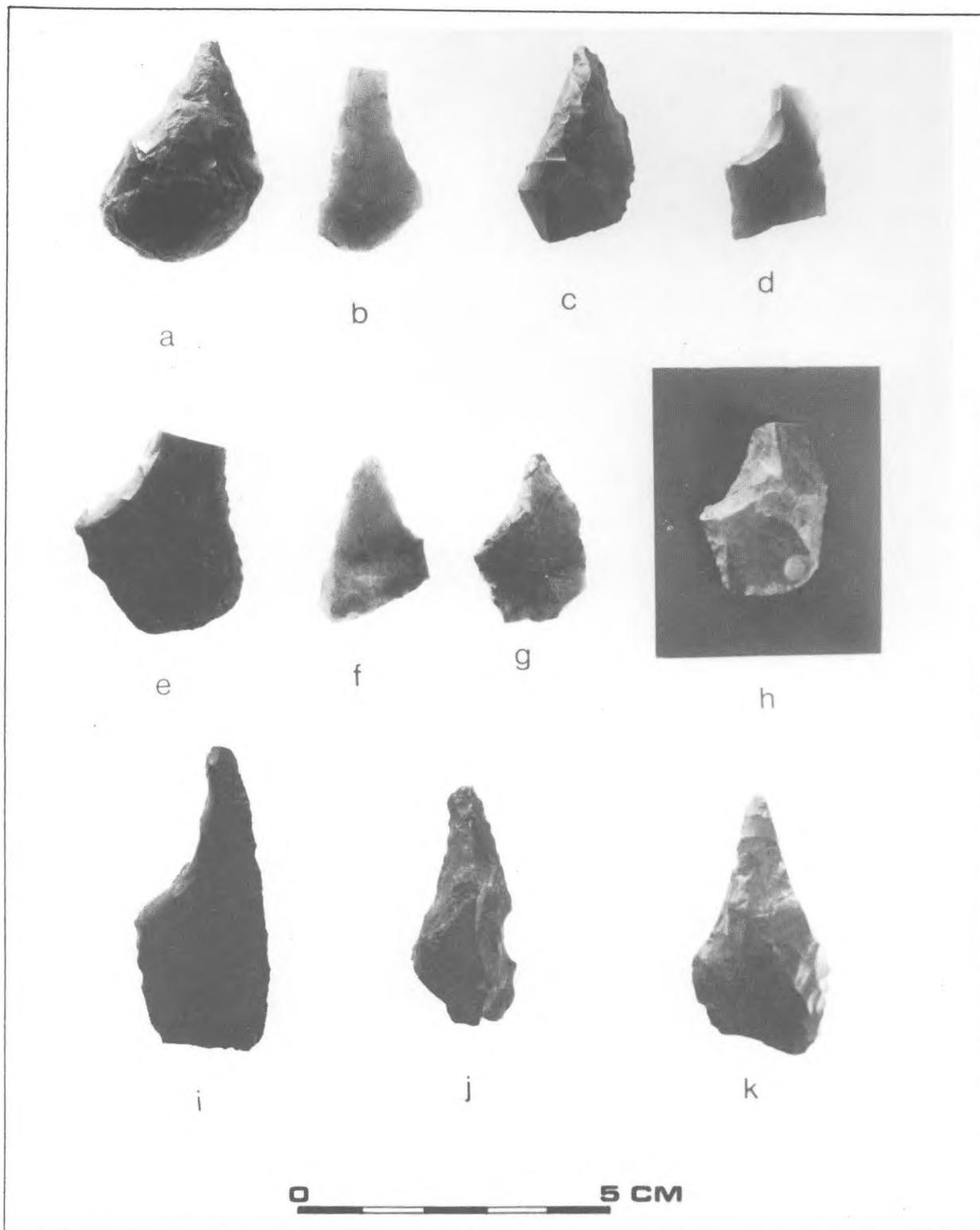


Figure 13. Prehistoric study sample key-shaped formed unifaces from the Lower Fraser and Thompson River regions.

Thompson River specimens:

(g): EcRh 12:55
 (h): EcRh 12:56
 (i): EeRh 1:33
 (j): EeRj 63:327
 (k): EfRf 3:77

Lower Fraser specimens:

(a): DjRi 3:4629
 (b): DjRi 5:2164
 (c): DjRi 5:10722
 (d): DjRi 5:11637
 (e): DjRi 5:12423
 (f): DjRi 5:12820

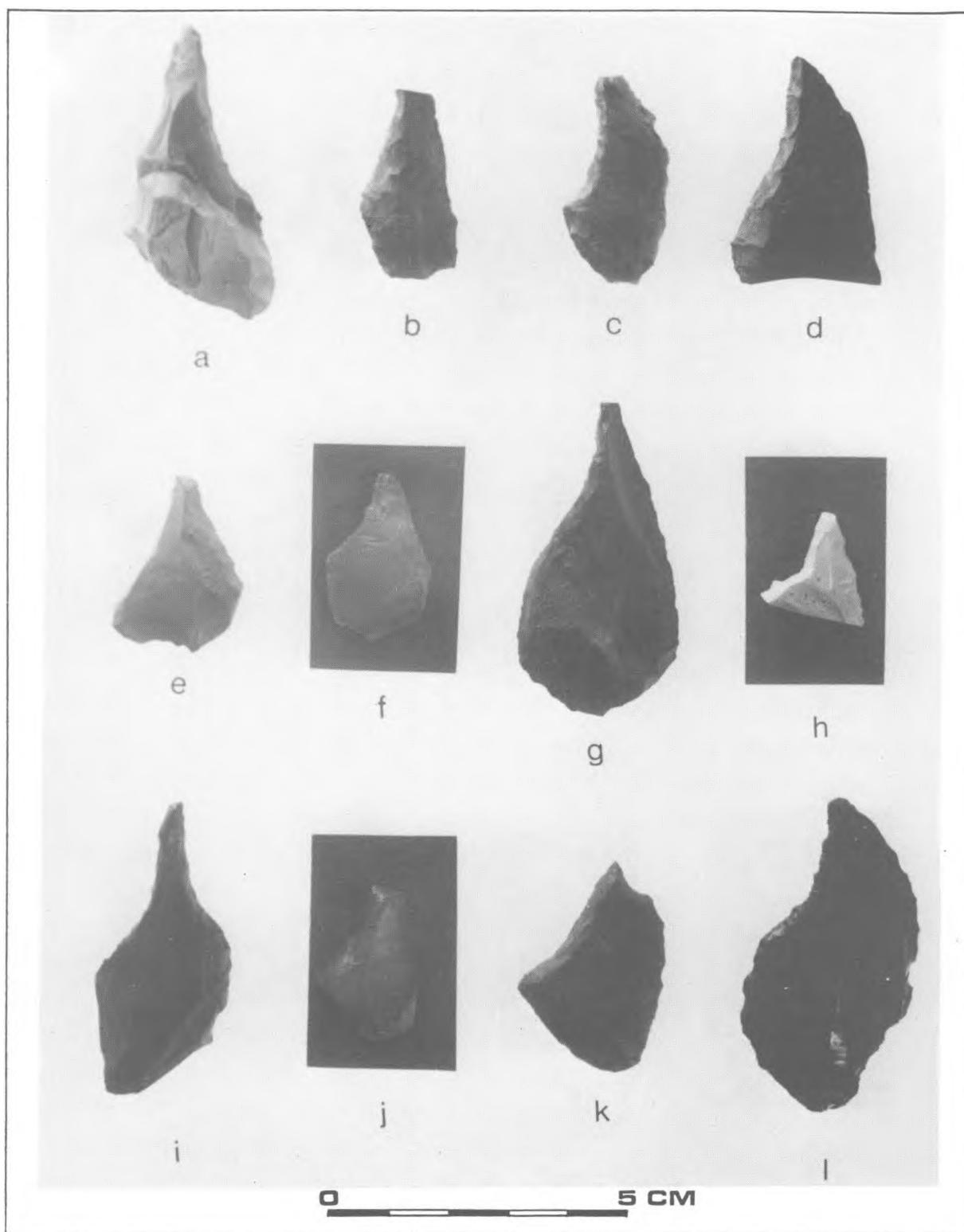


Figure 14. Prehistoric study sample key-shaped formed unifaces from the South Thompson - Shuswap region (sites EdQx 20 to EeQw 3).

Specimen	(a): EdQx 20:A-7001	(g): EdRa 22:2-105
	(b): EdQx 20:B1-100	(h): EeQw 3:517
	(c): EdRa 9:350	(i): EeQw 3:565
	(d): EdRa 9:378	(j): EeQw 3:588
	(e): EdRa 22:1-31	(k): EeQw 3:594
	(f): EdRa 22:1-37	(l): EeQw 3:596

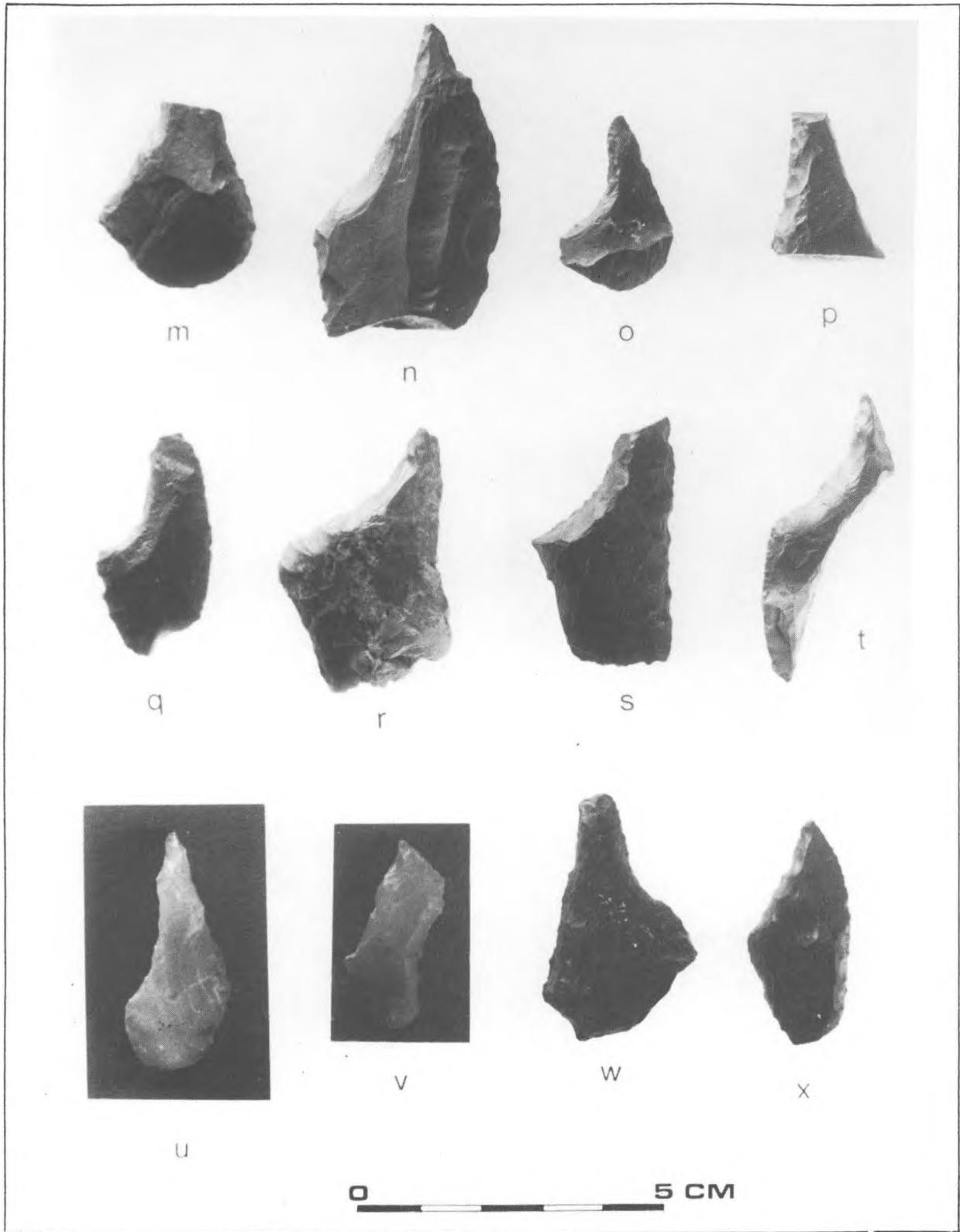


Figure 15. Prehistoric study sample key-shaped formed unifaces from the South Thompson - Shuswap region (sites EeQw 3 [continued] to EeQw 6).

Specimen	(m): EeQw 3:618	(s): EeQw 6:313
	(n): EeQw 3:692	(t): EeQw 6:365
	(o): EeQw 3:811	(u): EeQw 6:511
	(p): EeQw 3:863	(v): EeQw 6:516
	(q): EeQw 6:197	(w): EeQw 6:555
	(r): EeQw 6:203	(x): EeQw 6:633

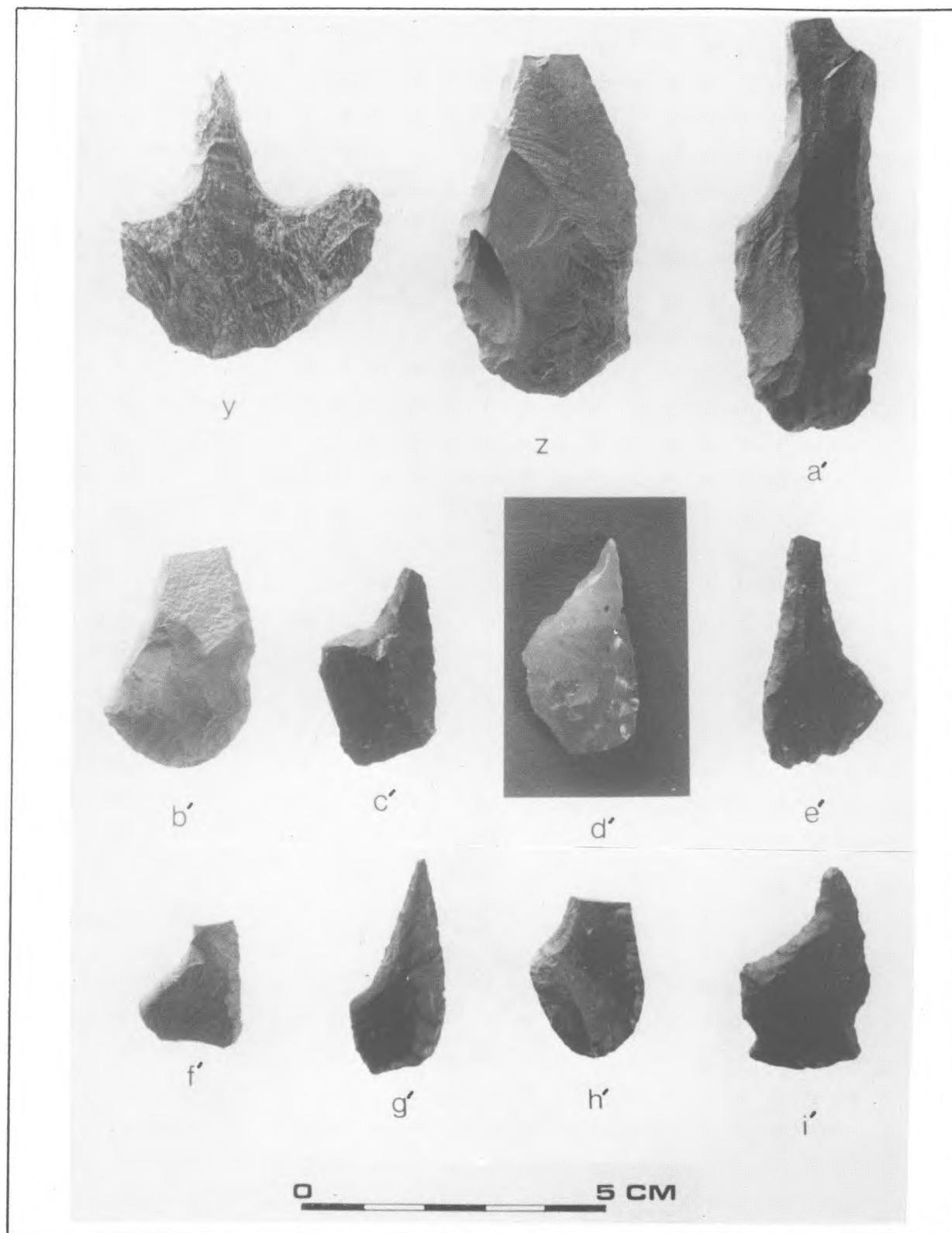


Figure 16. Prehistoric study sample key-shaped formed unifaces from the South Thompson - Shuswap region (sites EeQw 6 [continued] to EeRb 70).

Specimen	(y): EeQw 6:722	(d'): EeRb 3:910
	(z): EeQw 6:773	(e'): EeRb 3:1181
	(a'): EeQw 6:779	(f'): EeRb 3:1184
	(b'): EeRb 3:52	(g'): EeRb 10:6
	(c'): EeRb 3:875	(h'): EeRb 11:72
		(i'): EeRb 70:6490

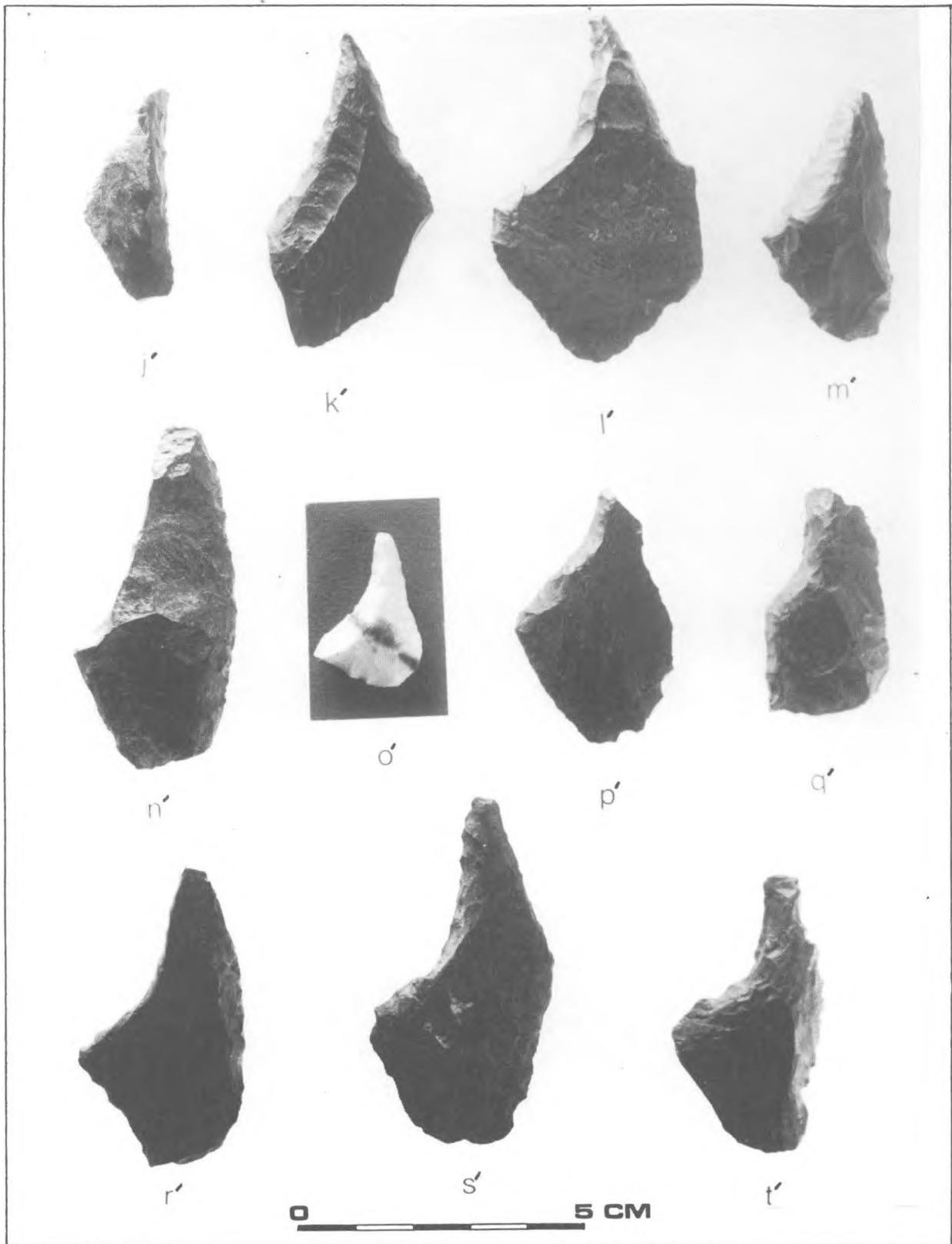


Figure 17. Prehistoric study sample key-shaped formed unifaces from the South Thompson - Shuswap region (sites EfQu 3 to EfQw 1).

Specimen	(j'): EfQu 3:55	(p'): EfQw 1:437
	(k'): EfQu 3:308	(q'): EfQw 1:563
	(l'): EfQu 6:126	(r'): EfQw 1:564
	(m'): EfQv 2:187	(s'): Y-1 (site unknown)
	(n'): EfQv 10:114	(t'): 7376 (site unknown)
	(o'): EfQv 10:186	

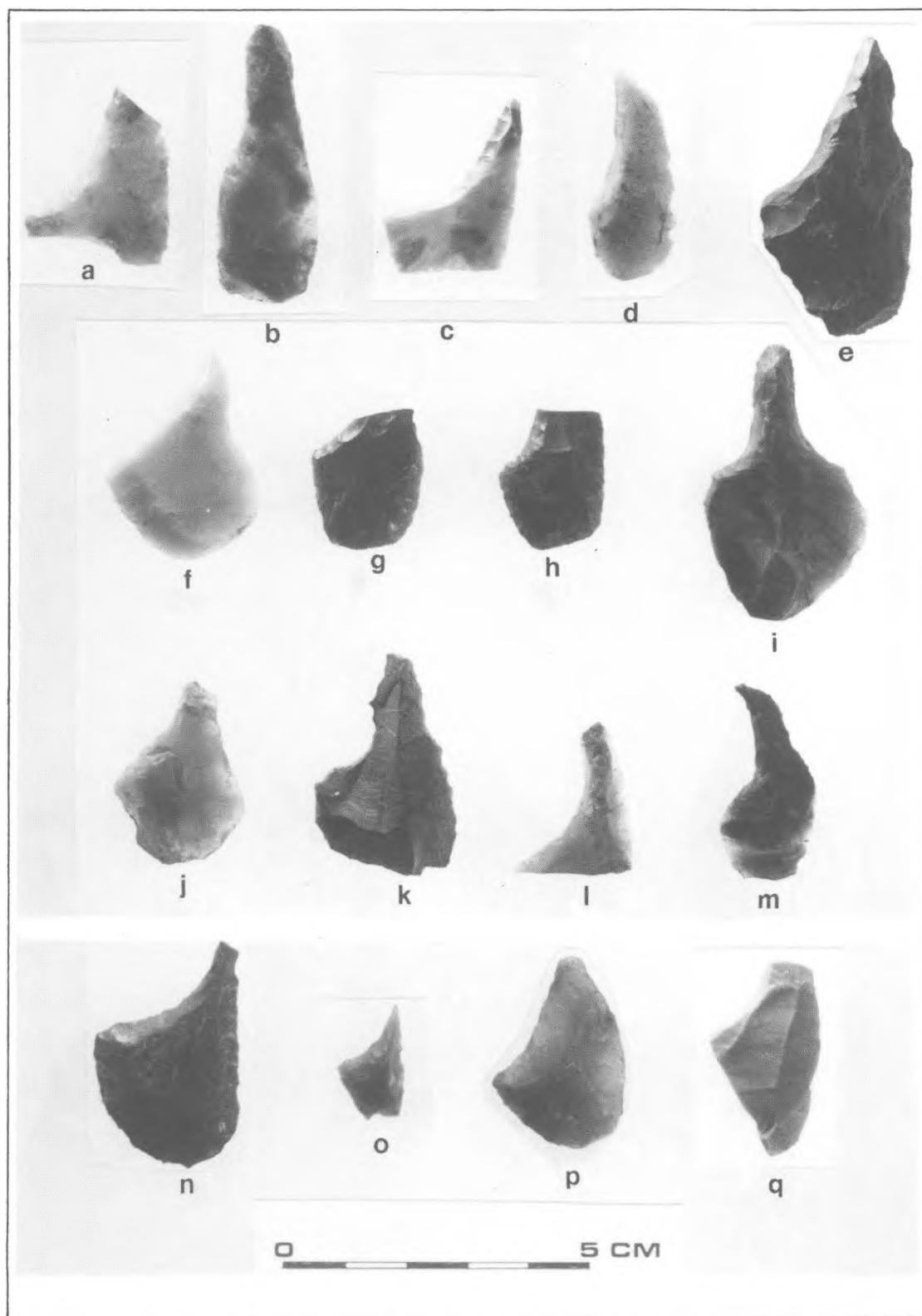


Figure 18. Prehistoric study sample key-shaped formed unifaces from the North Okanagan, South Okanagan, and Nicola regions.

North Okanagan specimens: South Okanagan specimens:

(a): DiQv 5:247
 (b): DiQv 5:273
 (c): DIQv 37:56
 (d): DIQv 39:11
 (e): DIQv 39:27

(f): DgQu 16:129
 (g): DhQv 48:865
 (h): DhQv 48:1386
 (i): DhQv 48:1479
 (j): DhQv 48:1572

(k): DhQv 48:1646
 (l): DhQv 48:1932
 (m): DhQv 48:1997
 (n): DhQv 48:2021
 (o): DhQv 48:2097
 (p): DhQv 48:2478

Nicola specimen:
 (q): EbRd 3:18

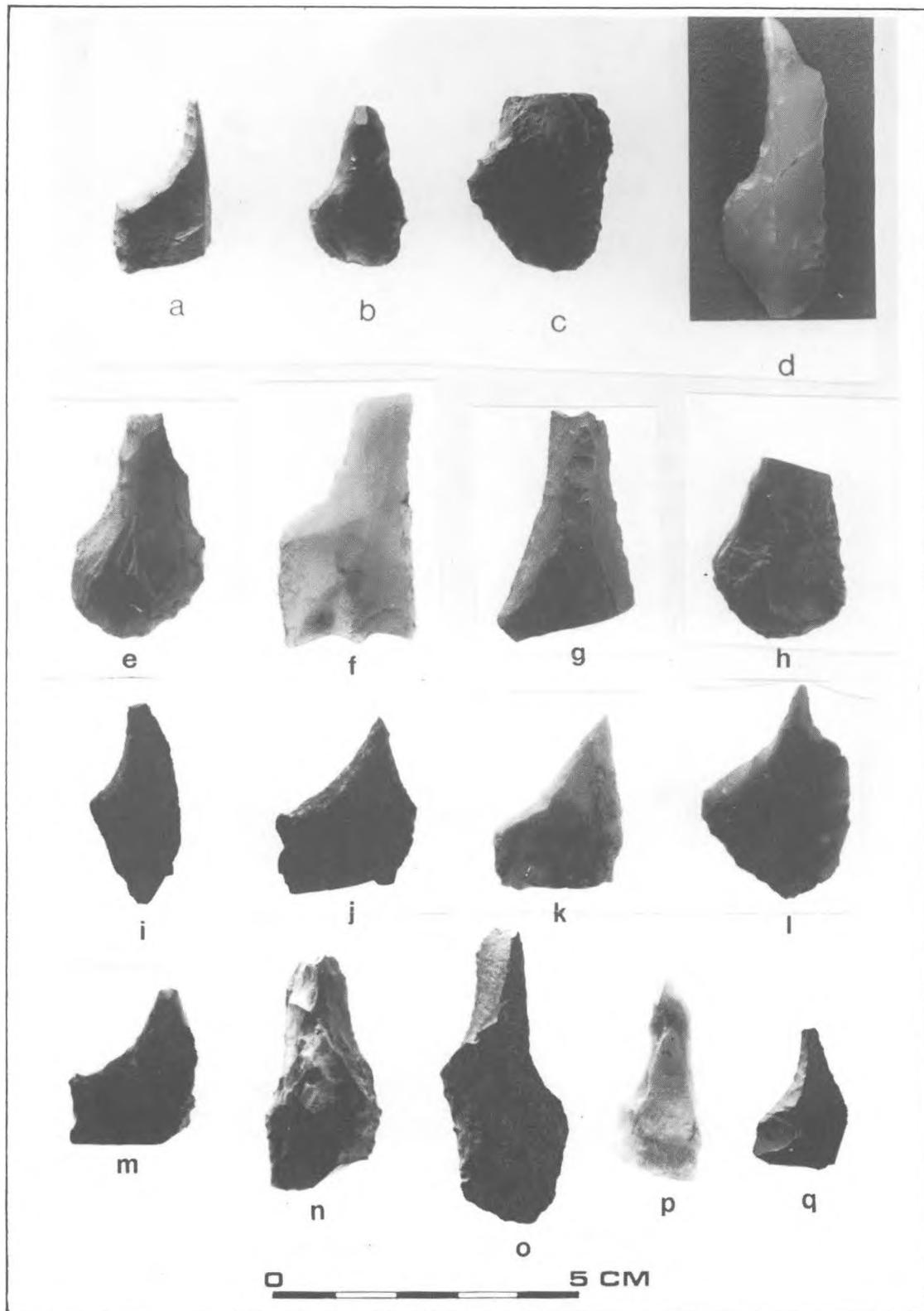


Figure 19. Prehistoric study sample key-shaped formed unifaces from the Arrow Lakes region (sites DiQm 4 to EaQl 10).

Specimen		
(a): DiQm 4:183	(f): DjQj 1:200	(l): EaQl 1:405
(b): DiQm 4:205	(g): DjQj 1:324	(m): EaQl 1:416
(c): DiQm 6:13	(h): DkQm 5:273	(n): EaQl 10:71
(d): DiQm 6:16	(i): DIQl 6:41	(o): EaQl 10:59
(e): DjQj 1:19	(j): EaQl 1:137	(p): EaQl 10:139
	(k): EaQl 1:244	(q): EaQl 10:141

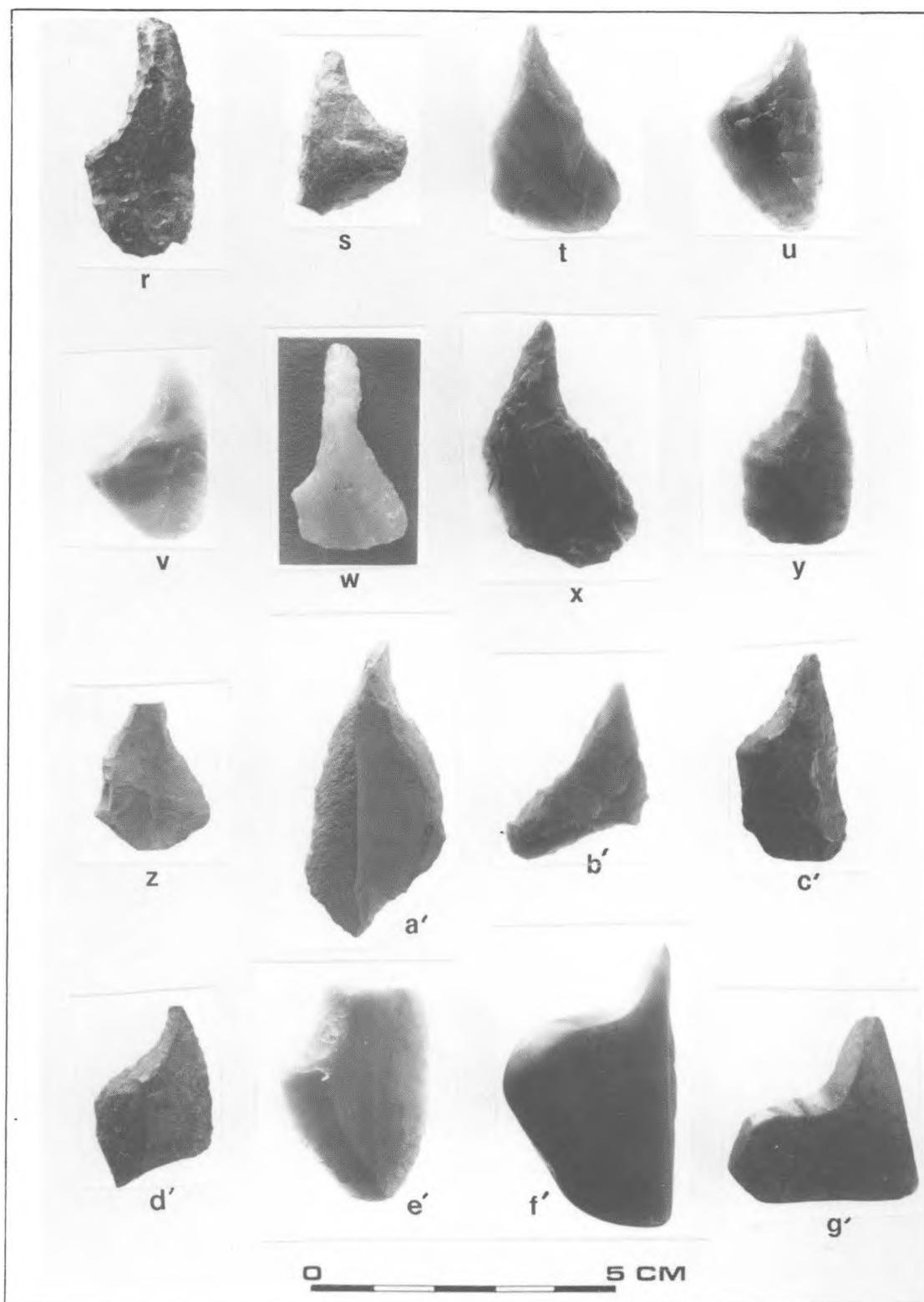


Figure 20. Prehistoric study sample key-shaped formed unifaces from the Arrow Lakes (site EaQl 14 [continued]), and East Kootenay regions. Item f is a nephrite tool resembling key-shaped formed unifaces from the South Thompson - Shuswap region; g' is made of steatite and is from the Mid-Fraser river region.

Specimen		
(r): EaQl 14:55	(x): EaQl 14:61	East Kootenay specimen: (e'): EdQa 8:32
(s): EaQl 14:56	(y): EaQl 14:62	
(t): EaQl 14:57	(z): EaQl 14:65	
(u): EaQl 14:58	(a'): EaQl 14:736	
(v): EaQl 14:59	(b'): EaQl 14:737	
(w): EaQl 14:60	(c'): EaQl 14:825	Miscellaneous: (f'): EfQs 1:75
	(d'): EaQl 14:826	(g'): EbRj y:872



Figure 21. Pronounced rounding and moderately bright polish on the distal tip of prehistoric specimen "Y-1". Magnified 8 X.



Figure 22. Pronounced rounding and smoothing, and moderately bright polish on the distal tip of prehistoric specimen EaQl 14:61. Magnified 8 X.



Figure 23. Pronounced smoothing and rounding, and dull polish on the ventral face of the distal projection of prehistoric specimen "Y-1". Note the "pitted" appearance (dark areas) and very extensive pronounced parallel multidirectional "scratch-groove" type striations. Magnified 8 X.

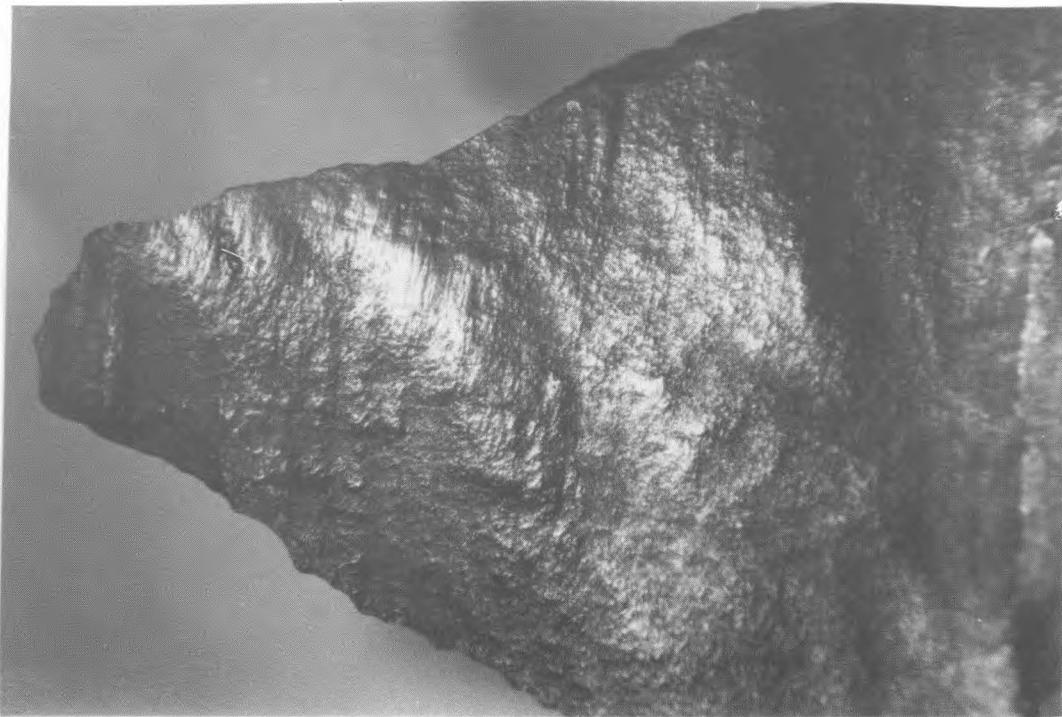


Figure 24. Pronounced rounding and smoothing, and bright polish associated with both "scratch-groove" and "sleeked" striations on the ventral face of prehistoric specimen DjRi 3:4629. Magnified 8 X.



Figure 25. Pronounced smoothing and rounding, moderately bright polish, random microflake scar pattern, and pronounced parallel multidirectional "scratch-groove" striations on the ventral face and concave margin edge aspect (top) of prehistoric specimen EeRb 10:6. Magnified 8 X. Arrows indicate edge section shown in Figure 26 (below).

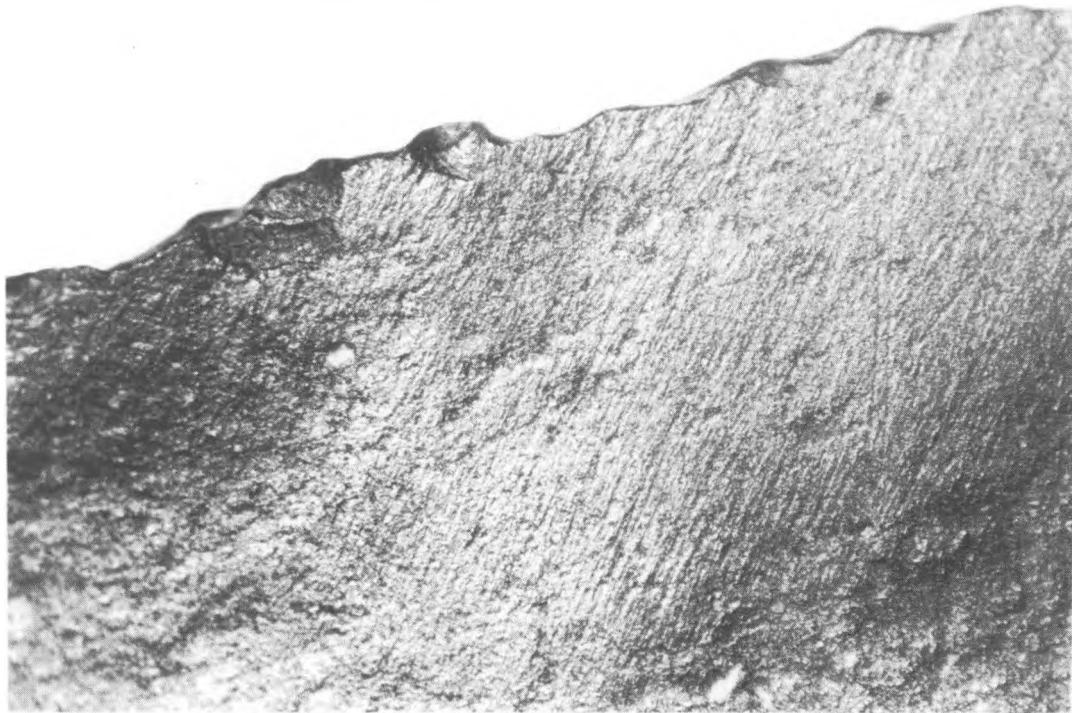


Figure 26. Detail of smoothing, polish, microflake scars, and striations on the ventral face of prehistoric specimen EeRb 10:6 (see also Figure 25). Magnified 20 X.

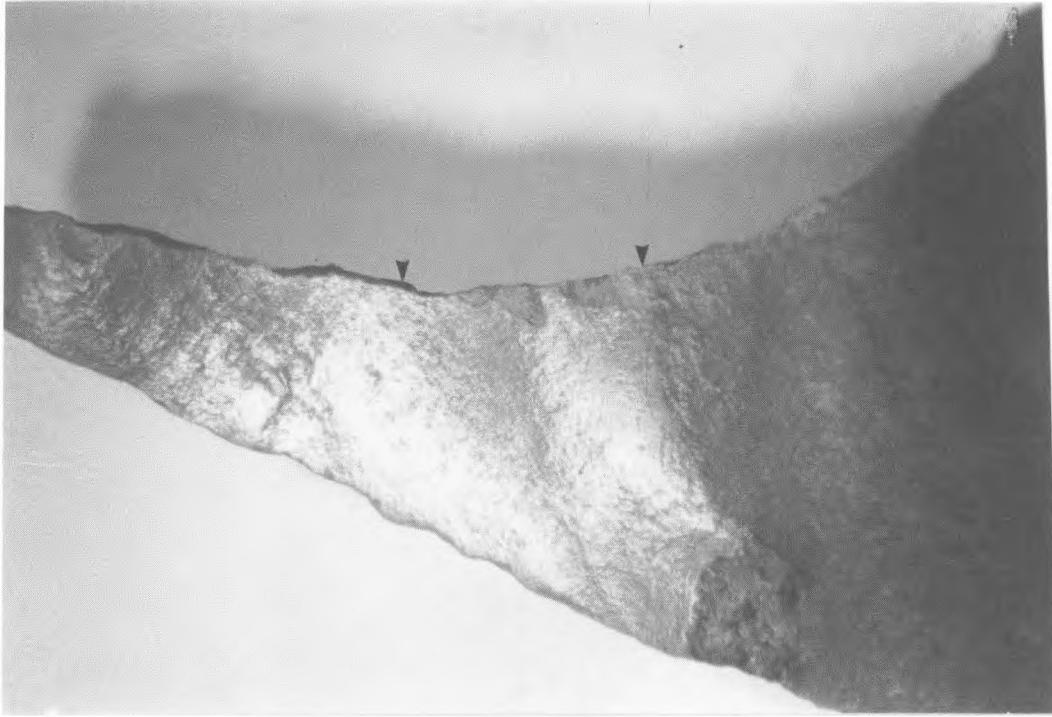


Figure 27. Moderate rounding and smoothing, bright polish, moderate intensity parallel unidirectional "scratch-groove" striations, and typical random microflake scar pattern on the ventral face of prehistoric specimen DiQm 4:183. Magnified 7.5 X. Arrows indicate edge section shown in Figure 28 (below).

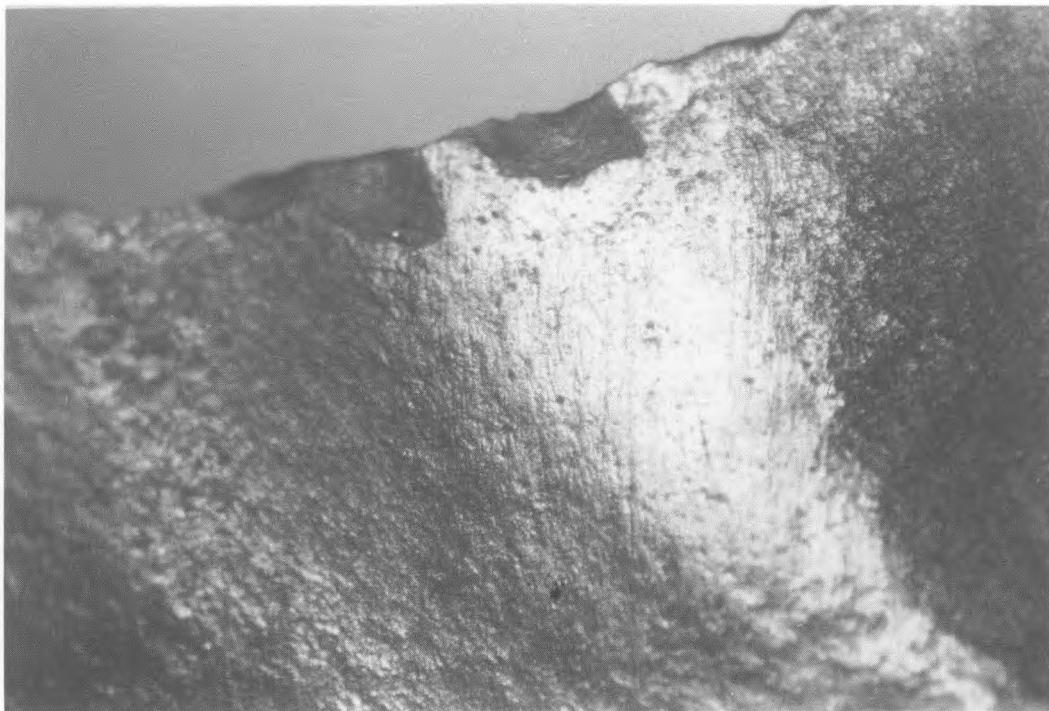


Figure 28. Detail of rounding, smoothing, polish, striations, and microflake removals on the ventral face of prehistoric specimen DiQm 4:183 (see also Figure 27). Magnified 20 X.



Figure 29. Moderate smoothing and rounding, and bright polish on the ventral face of prehistoric specimen EeRh 1:33. Note atypical inverse retouch along the "opposite" margin. Magnified 8.5 X.



Figure 30. Pronounced smoothing and rounding, and associated "sleeked" type striations on the ventral face of prehistoric specimen EeRb 70:6490. Magnified 8.5 X.



Figure 31. Moderate smoothing and rounding, bright polish, and random microflake scar pattern on the ventral face of prehistoric specimen EeRk 4:19-1007. Magnified 8 X.

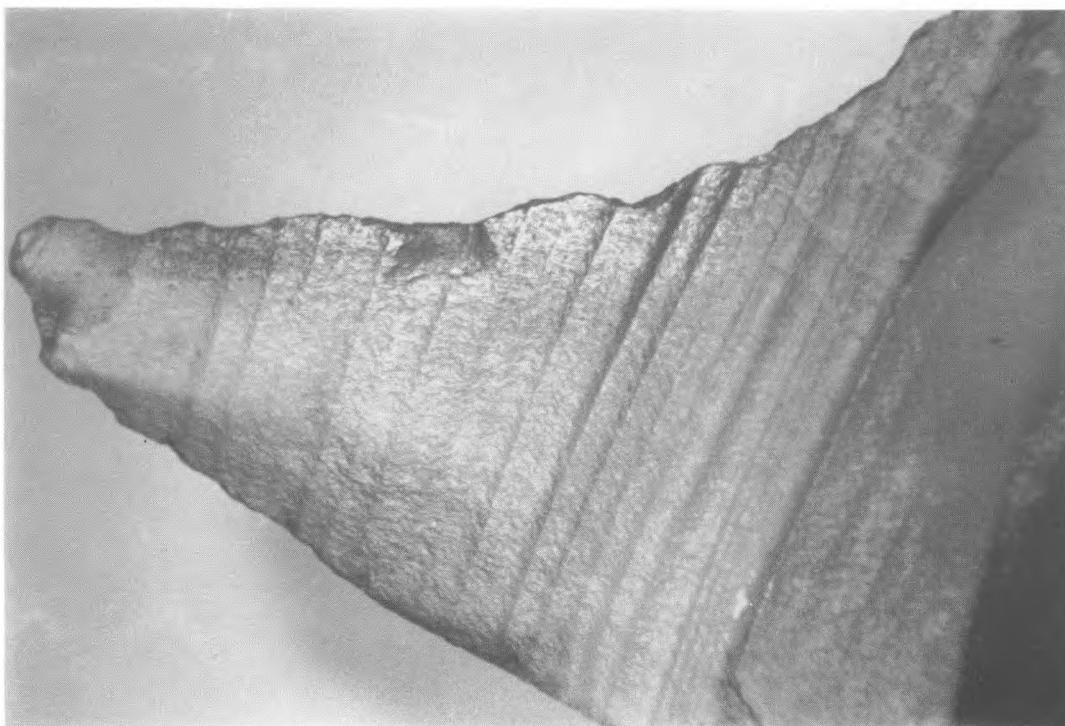


Figure 32. Slight smoothing and rounding, bright polish, and random microflake scar pattern on the ventral face of prehistoric specimen EeRk 4:20-372. Magnified 8 X.



Figure 33. Slight rounding and smoothing, bright polish, and contiguous-superposed microflake scar pattern on the ventral face of prehistoric specimen EeRk 4:6-407. Magnified 10 X.

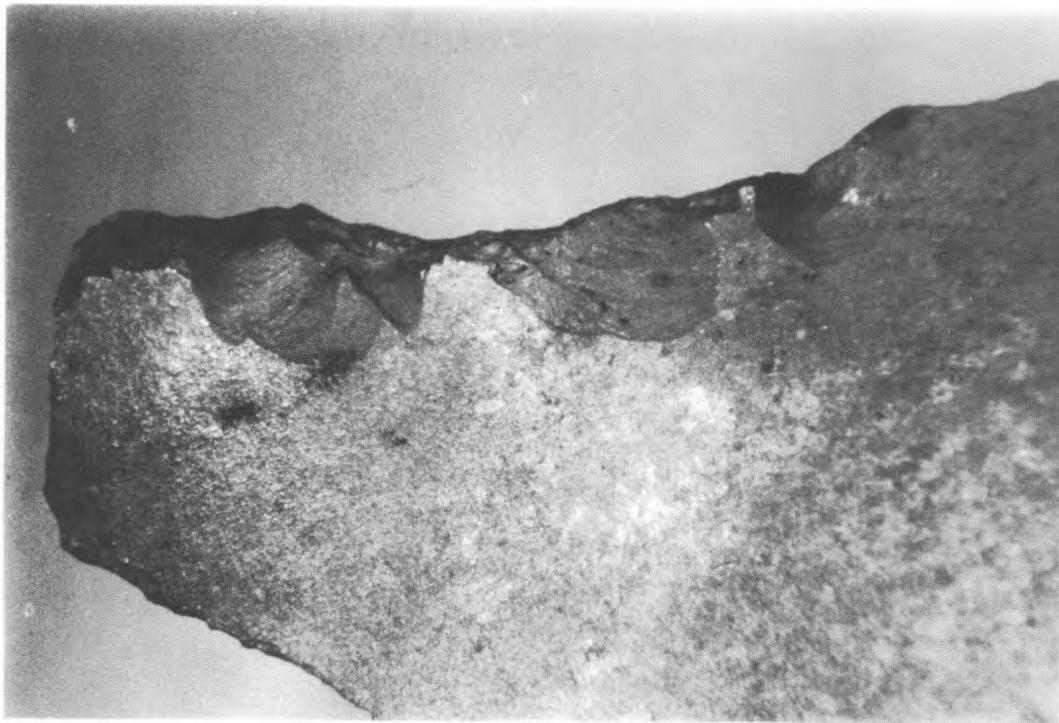


Figure 34. Moderately bright polish and pronounced contiguous superposed microflake scar pattern on the ventral face, and pronounced edge rounding and crushing along the concave margin of prehistoric specimen FiRs 1:2028. Magnified 8 X.



Figure 35. Pronounced smoothing, bright polish, and parallel multidirectional "scratch-groove" type striations on the ventral face of prehistoric specimen EfQv 10:114. Magnified 20 X.



Figure 36. Slight rounding and bright polish appearing on microtopographical features (arrows) apparently caused by long-term rubbing of the user's thumb on the left proximal-lateral section of the dorsal surface of prehistoric specimen EeRh 1:33. Magnified 20 X.



Figure 37. Pronounced smoothing and moderately bright polish on the dorsal aspect of the "opposite" margin of prehistoric specimen "Y-1" apparently caused by long-term rubbing of the user's forefinger and/or thumb in this location. Magnified 16 X.



Figure 38. Slight smoothing and moderately bright polish apparently caused by long-term rubbing of the user's forefinger on the dorsal aspect of the "opposite" margin of prehistoric specimen EfQv 10:114. Magnified 16 X.

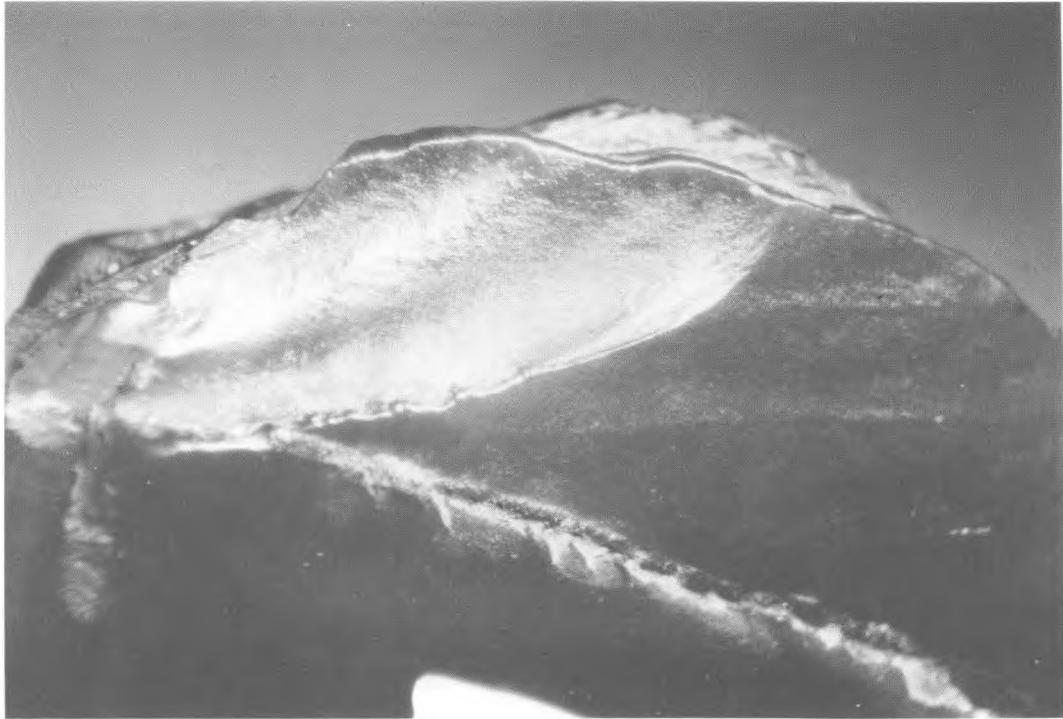


Figure 39. Typical "hide scraper"-type microwear trace pattern along the proximal margin edge of prehistoric specimen DjRi 3:4629. Magnified 8 X.



Figure 40. Polymerized resin hafting mastic residues (dark specks) adhering to the proximal half of the dorsal surface of prehistoric specimen EeRl 7:1107. Magnified 16 X.

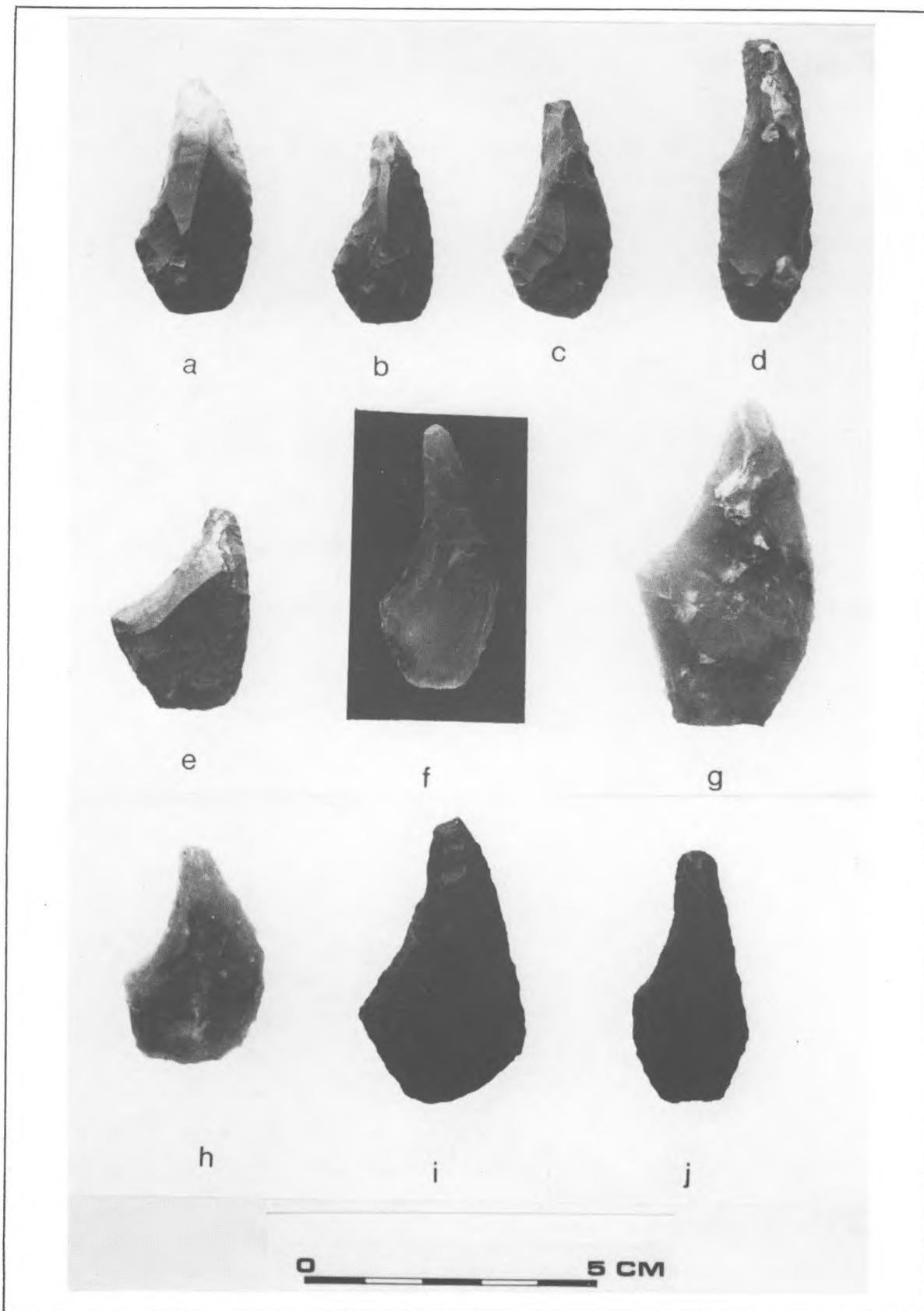


Figure 41. The ten replicated key-shaped formed unifaces (in order from #1-#10) used in the experimental component of this study.

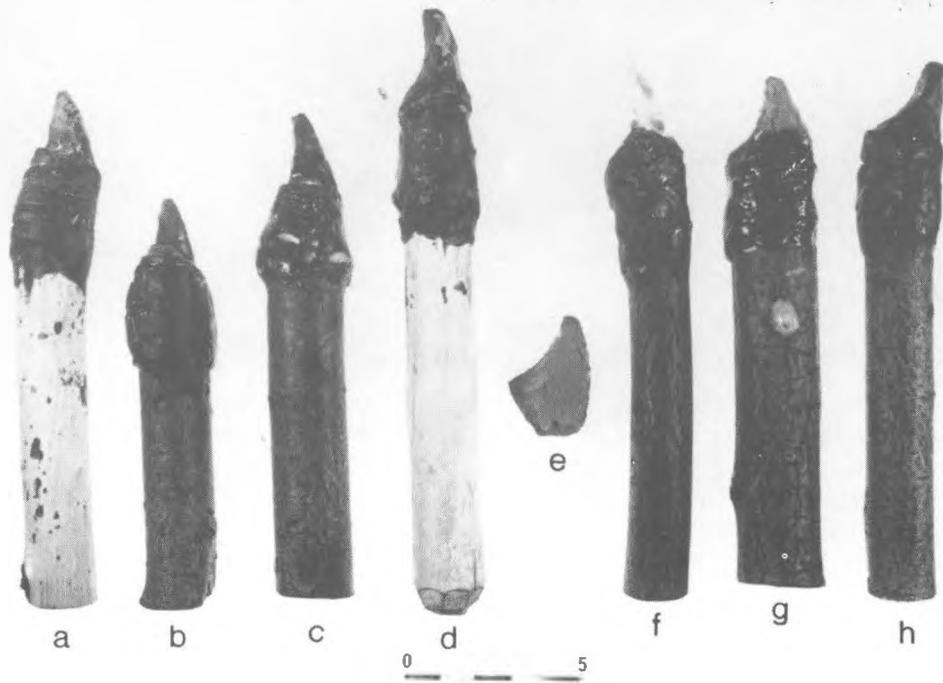


Figure 42. The eight experimental tools used to work branches and stalks of woody plants in this study. E.T.'s #1-#4, #6, #8, and #10 (a-d,f-h) were hafted during all, or most of their use-histories; E.T. #5 was used entirely hand-held.



Figure 43. Stripping bark and shaving, scraping, and planing a saskatoon stalk with the concave margin of E.T. #1 employing one of the most commonly used motor patterns. Arrow indicates direction of working stroke. Note that the index finger is placed on the dorsal face of the "opposite" margin for support, and the juncture of the ventral face of the tool with the haft acts as an effective guide.



Figure 44. Shaving, scraping, and planing a saskatoon stalk with the concave margin of E.T. #1. This motor pattern is similar to that depicted in Figure 43 (above), but note that the thumb is placed on the dorsal face of the "opposite" margin for support.



Figure 45. Using the "opposite" margin of E.T. #2 to remove and smooth down a secondary branch node on a juniper branch. Note that the tool is being used hand-held (unhafted).



Figure 46. Shaving, scraping, and planing down a juniper branch with the concave margin of E.T. #2 (used unhafted).



Figure 47. Stripping bark and shaving, scraping, and planing a juniper stalk using the "opposite" margin of E.T. #1. Note placement of thumb on the dorsal aspect of concave margin for support.



Figure 48. Incising a large groove into a saskatoon stalk using the distal projection tip of E.T. #1. Note that the index finger is placed on the dorsal surface of the projection for support.



Figure 49. Using the concave margin of E.T. #1 to significantly modify (carve) the proximal end of a saskatoon stalk. Note placement of index finger on dorsal aspect of "opposite" margin for support.



Figure 50. Using the distal projection tip of E.T. #7 (hafted) to incise a linear groove into the shaft of a soaked deer antler beam.



Figure 51. Using the concave margin of E.T. #7 (hafted) to attempt to scrape a soaked deer metacarpal. The tool was effective at removing remaining fleshy tissue, but had very little effect on the bone.



Figure 52. Saskatoon bark and wood shavings produced using key-shaped formed unifaces.

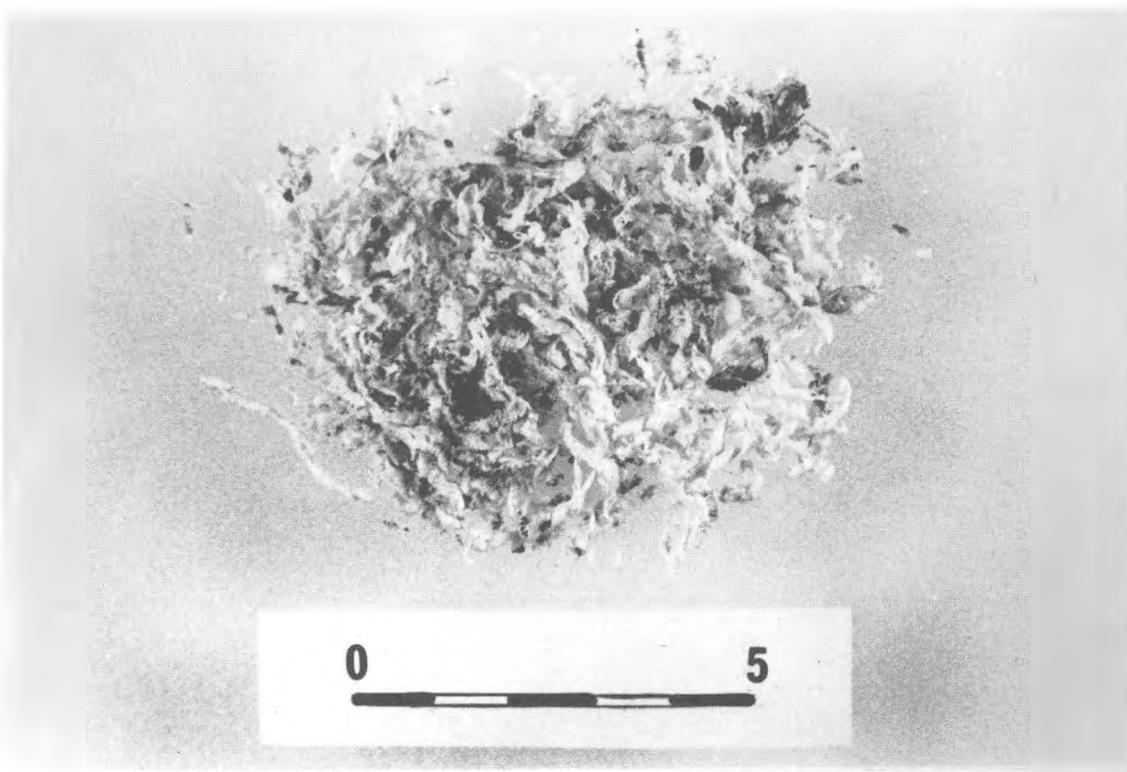


Figure 53. Soaked deer antler shavings and scrapings produced using key-shaped formed unifaces.

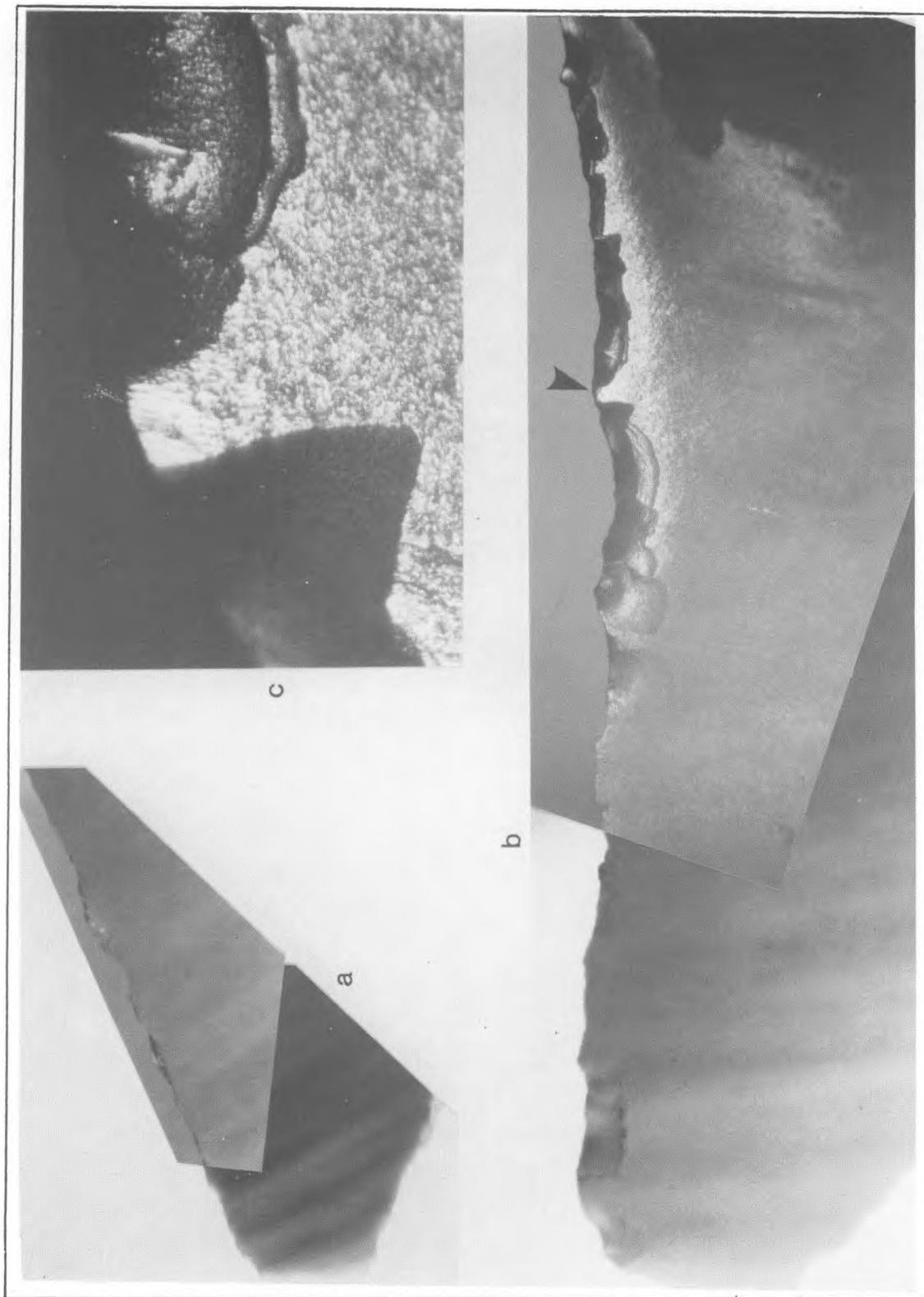


Figure 54. Pre- and post-use photomicrographs of E.T. #1, used to work saskatoon (12,500 strokes).

- (a): Pre-use photo mosaic of the ventral face of E.T. #1 showing concave margin (top) and distal projection tip (magnified 5.5 X);
- (b): Post-use photo mosaic indicating microflake scars on the distal tip, and contiguous superposed microflake scars and bright polish on the medial section of the concave margin edge aspect and ventral face (magnified 9.5 X). Arrow indicates location of edge segment depicted in (c).
- (c): "Sleeked" type striations (arrows), moderate rounding, and bright polish, on a prominent feature on the ventral edge aspect of the concave margin (see [b]; magnified 40 X).

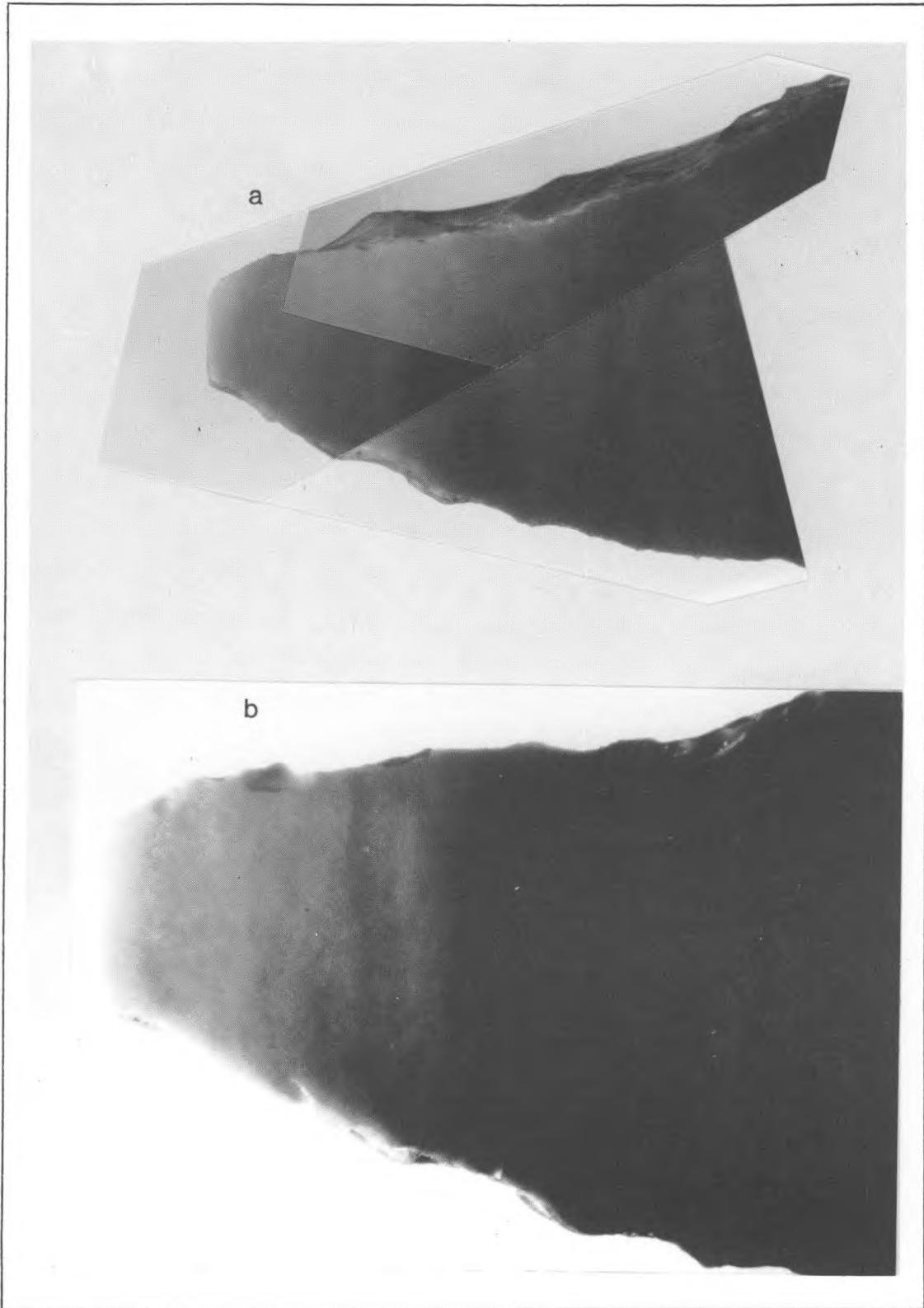


Figure 55. Pre- and post-use photomicrographs of E.T. #2, used to work juniper (7,700 strokes).

- (a): Pre-use photo mosaic of the ventral face of E.T. #2 showing concave margin (top) and distal projection tip (left) (magnified 4.5 X);
- (b): Post-use photo mosaic indicating random microflake removal along the ventral edge aspects (magnified 7.5 X).

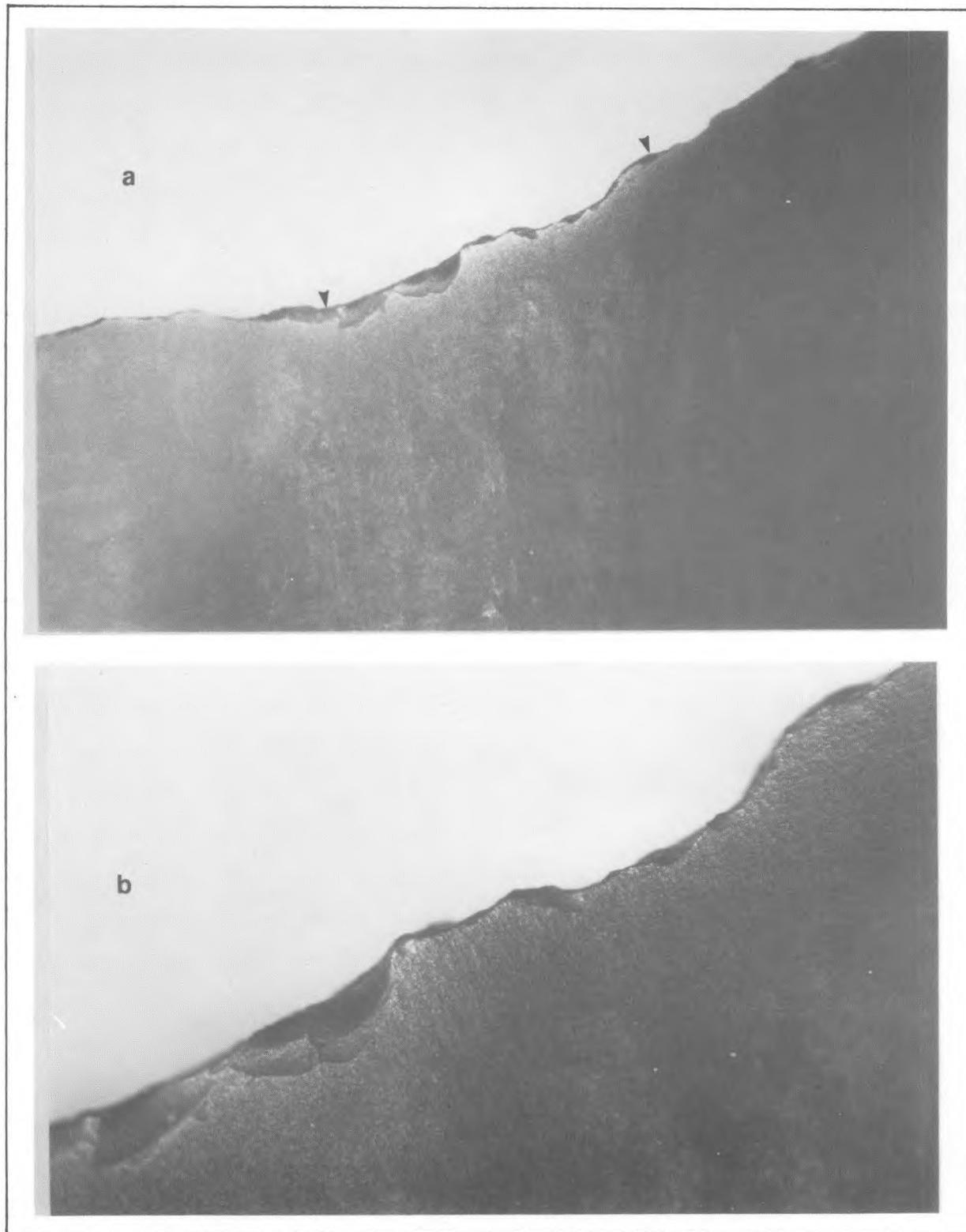


Figure 56. Post-use photomicrographs of the medial section of the concave edge aspect of E.T. #2, used to work juniper (7,700 strokes).

- (a): Contiguously patterned microflake scars and bright polish (magnified 10 X). Arrows indicate location of edge segment depicted in (b).
- (b): Detail of microflake scars, polish, and moderate rounding (see [a]; magnified 35 X).

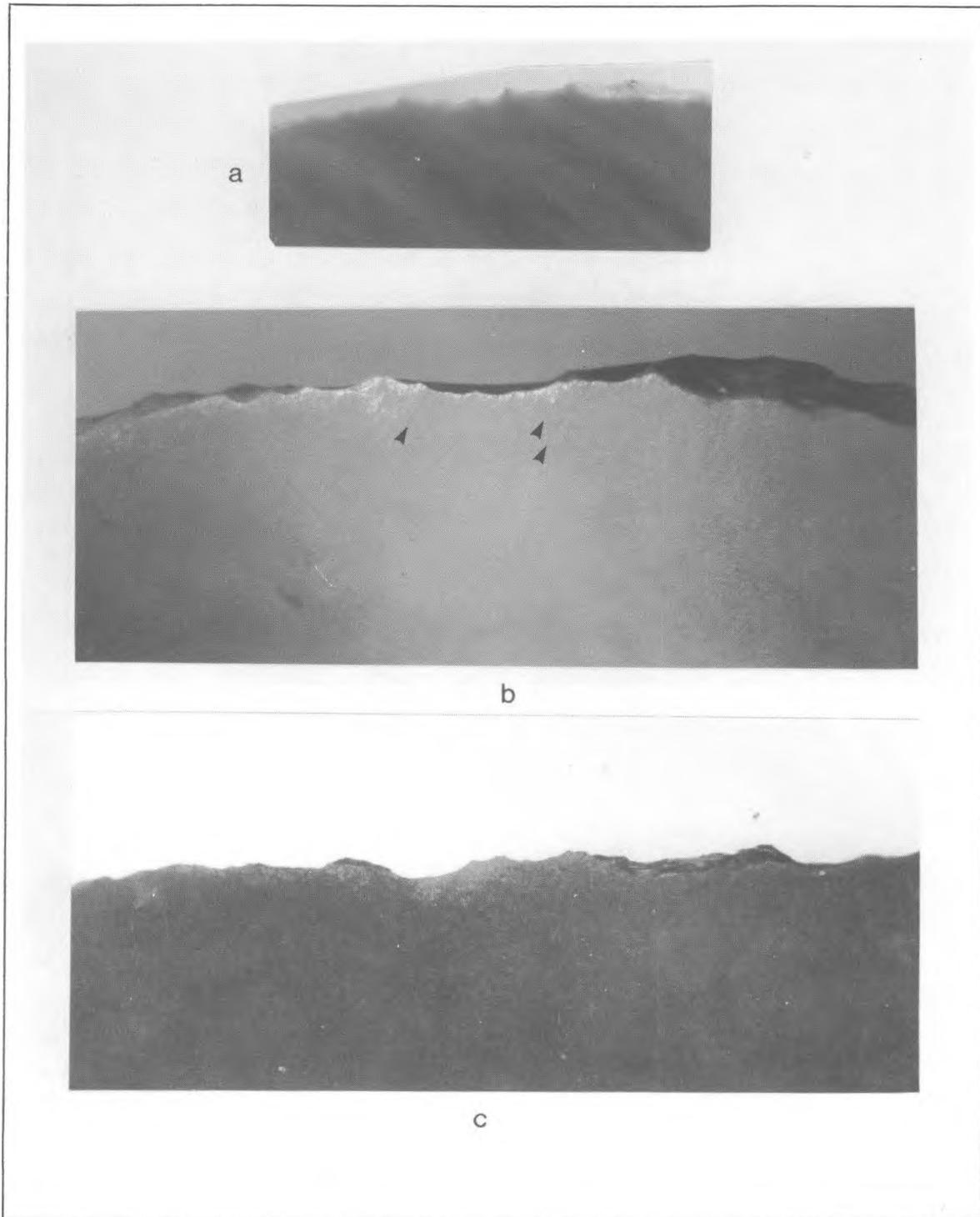


Figure 57. Microphotographs of the "opposite" margins of E.T.'s #1 and #2.

- (a): Pre-use photo of medial section of the "opposite" margin of E.T. #1 (magnified 5 X).
- (b): Post-use photo of medial section of the "opposite" margin of E.T. #1 indicating "scratch-groove" striations (arrows) and moderately bright polish (magnified 9 X).
- (c): Post-use photo of E.T. #2 indicating moderately bright edge polish on the medial edge aspect of the "opposite" margin (magnified 10 X).

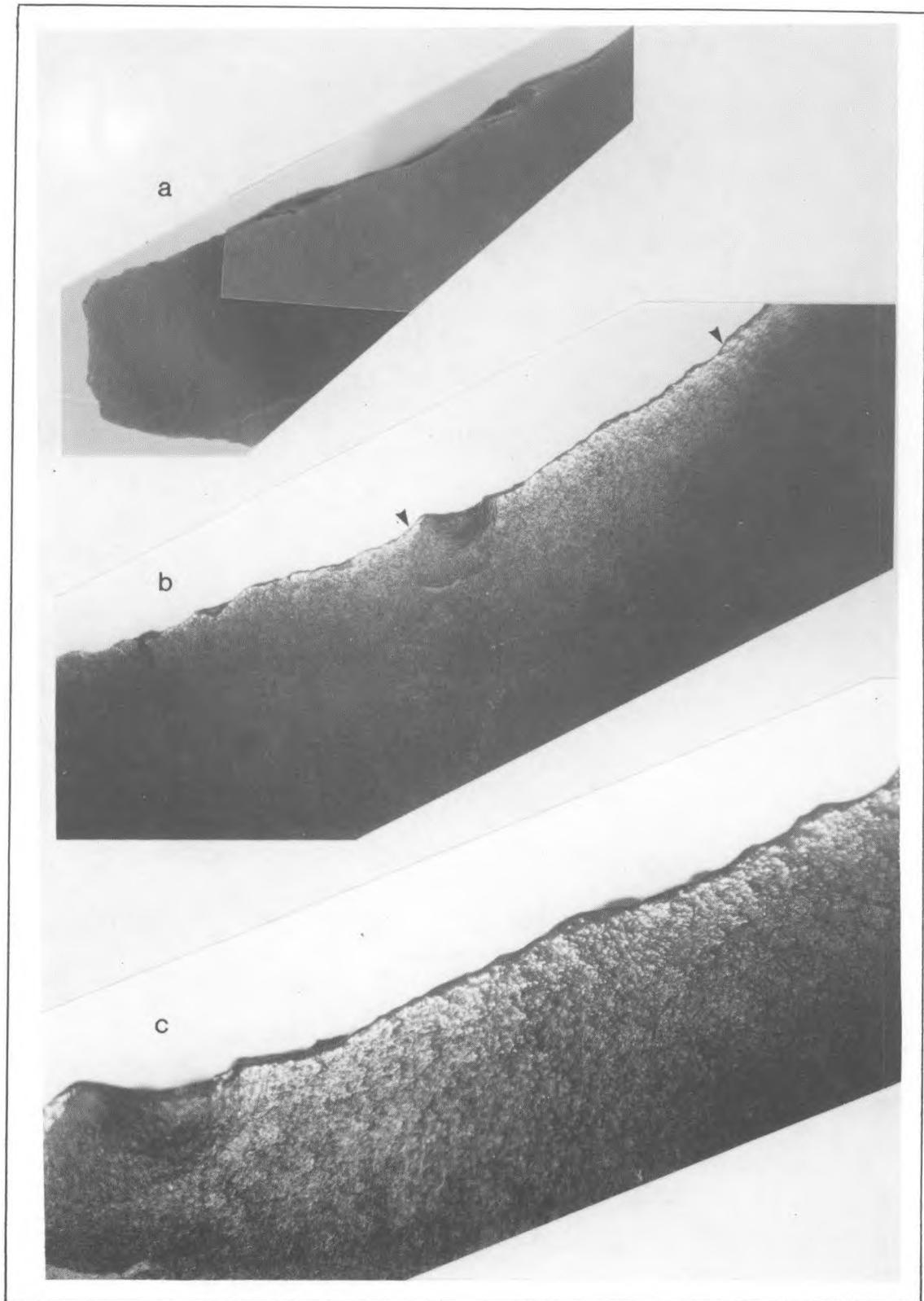


Figure 58. Pre- and post-use photomicrographs of E.T. #3, used to work saskatoon (15,400 strokes).

- (a): Pre-use photo mosaic of the ventral face of E.T. #3 showing concave margin (top) and distal projection tip (magnified 5 X);
- (b): Post-use photo of the medial-distal section of the concave margin edge aspect indicating random microflake scar removal and bright polish (magnified 10 X). Arrows indicate edge segment depicted in (c)
- (c): Detail of polish and slight edge rounding for the edge segment indicated in (b) (magnified 40 X).

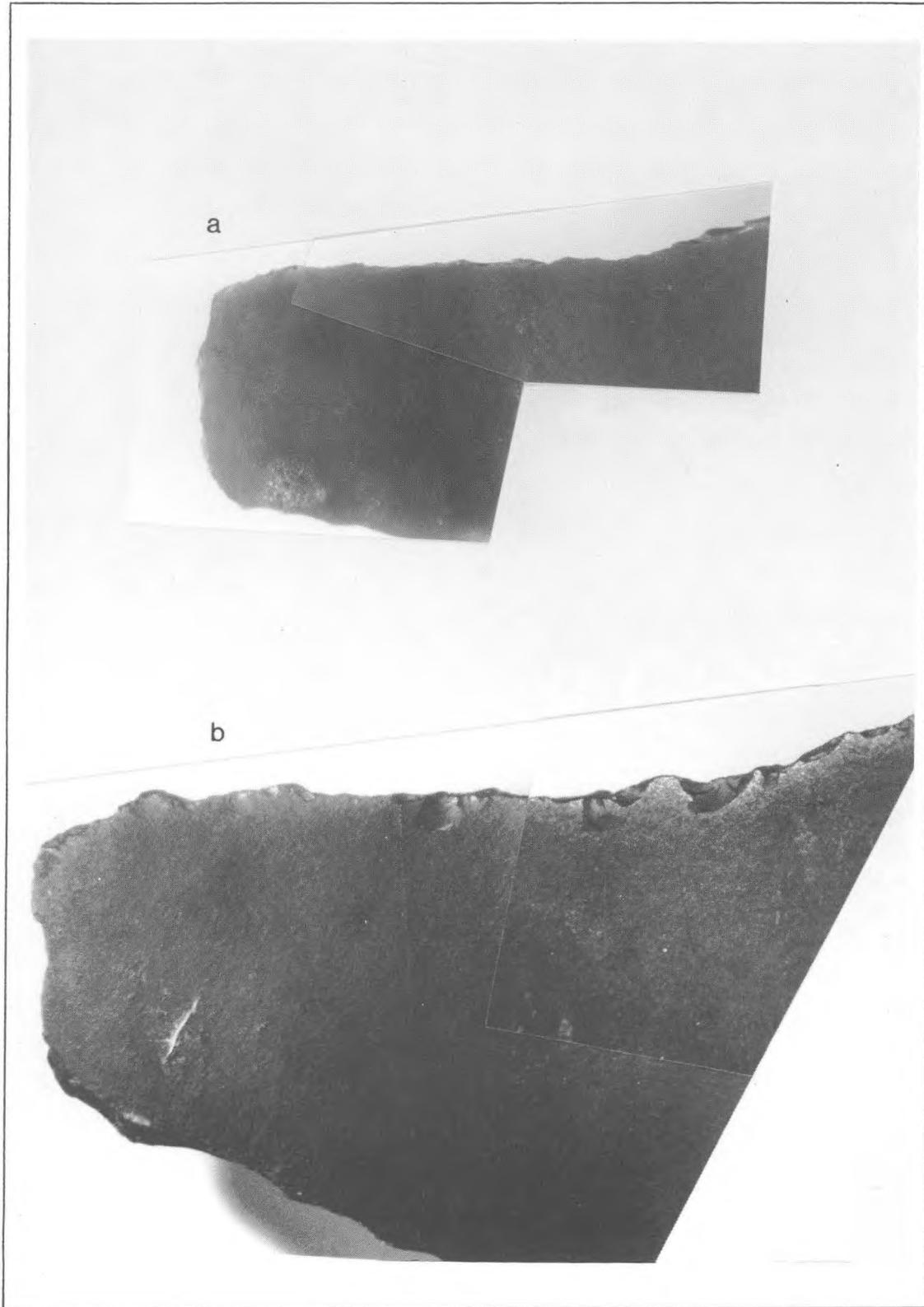


Figure 59. Pre- and post-use photomicrographs of E.T. #4, used to work willow (17,650 strokes).

- (a): Pre-use photo mosaic of the ventral face of E.T. #4 showing concave margin (top) and distal projection tip (magnified 5.5 X);
- (b): Post-use photo mosaic indicating contiguous superposed microflake scar pattern, bright polish, moderate rounding, and slight crushing on the medial-distal section of the concave margin; and moderate crushing on distal tip edge (magnified 9 X).

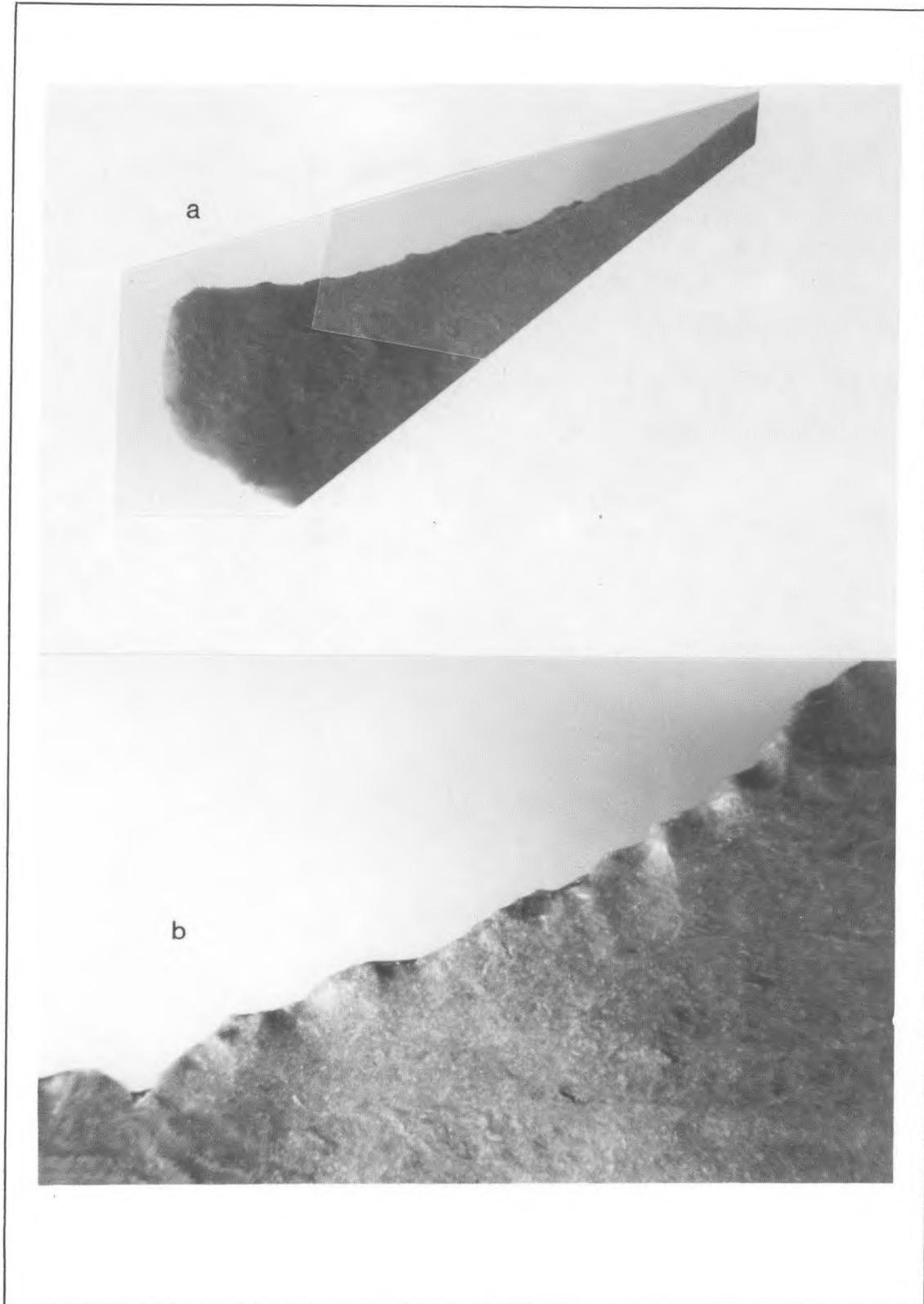


Figure 60. Pre- and post-use photomicrographs of E.T. #5, used to work saskatoon (600 strokes).

- (a): Pre-use photo mosaic of the ventral face of E.T. #5 showing concave margin (top) and distal projection tip (magnified 5 X);
- (b): Post-use photo of the medial-distal section of the concave margin edge aspect indicating contiguous superposed microflake scar removal pattern, pronounced edge rounding and smoothing, and pronounced crushing (magnified 10 X).

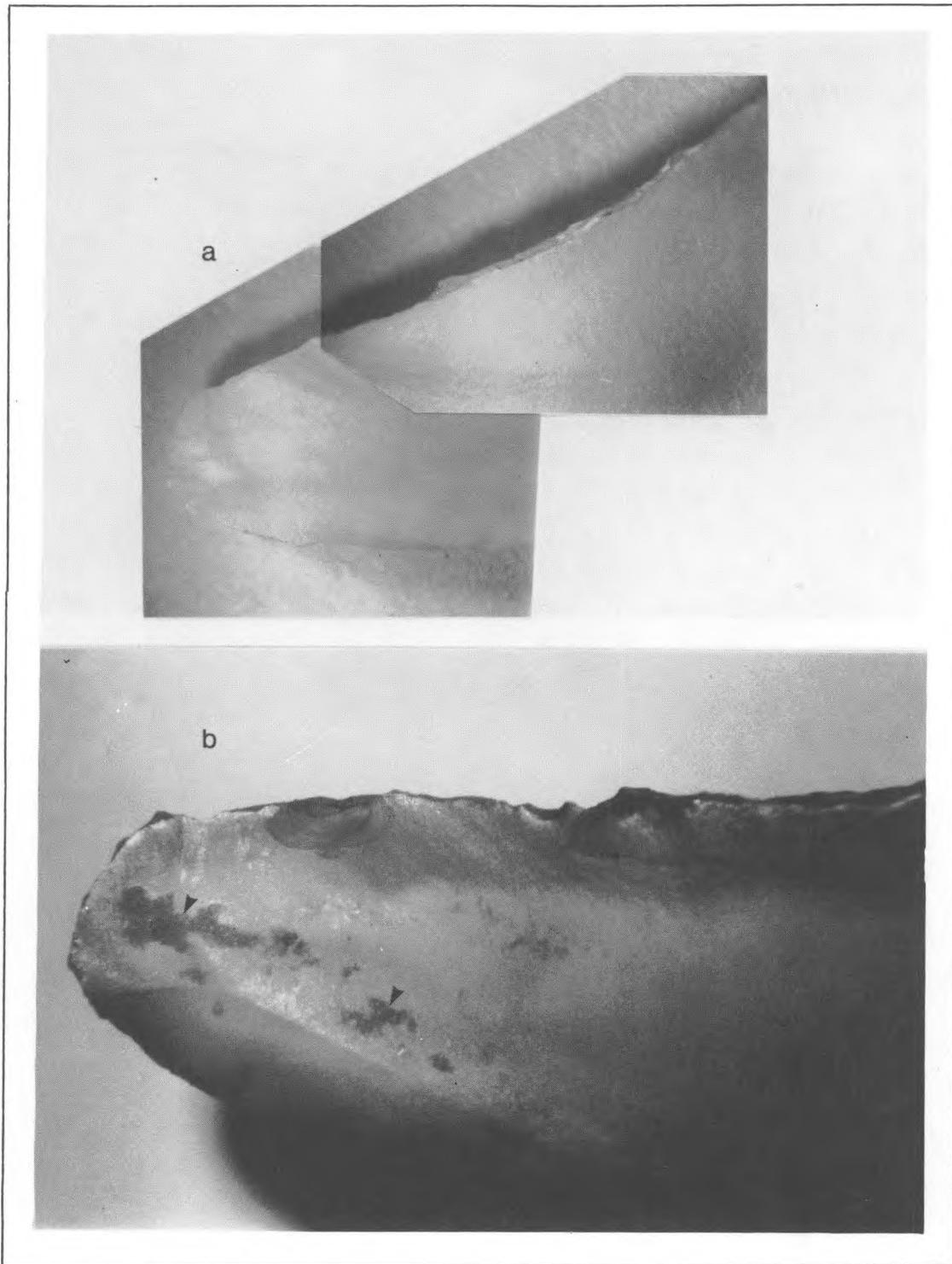


Figure 61. Pre- and post-use photomicrographs of E.T. #6, used to work saskatoon (5,250 strokes).

- (a): Pre-use photo mosaic of the ventral face of E.T. #6 showing concave margin (top) and distal projection tip (magnified 5 X);
- (b): Post-use photo indicating: random microflake scar pattern, bright polish, moderate rounding and smoothing, and slight crushing along the concave margin; and bright polish and slight edge rounding on the distal projection tip (magnified 8.5 X). Arrows indicate plant resin residue deposits adhering in slight depression on ventral face.



Figure 62. Pre- and post-use photomicrographs of E.T. #7, used to work deer bone and antler (2,200 strokes).

- (a): Pre-use photo mosaic of the ventral face of E.T. #7 showing concave margin (top) and distal projection tip (left) (magnified 5 X);
- (b): Post-use photo mosaic indicating: pronounced crushing, moderate edge rounding, and extensive microflake removal on the distal projection tip; and random microflake pattern, pronounced edge rounding and smoothing, moderately bright polish, and pronounced edge crushing on the medial-distal section of the concave margin (magnified 9 X).



Figure 63. Pre- and post-use photomicrographs of E.T. #8, used to work saskatoon (11,200 strokes).

- (a): Pre-use photo mosaic of the ventral face of E.T. #8 showing concave margin (top) and distal projection tip (magnified 5 X);
- (b): Post-use photo mosaic indicating moderately bright polish adjacent to the distal projection tip; and randomly patterned microflakes, slight edge rounding and smoothing, bright polish on some edge aspect segments, and slight crushing on the concave margin (magnified 10 X).

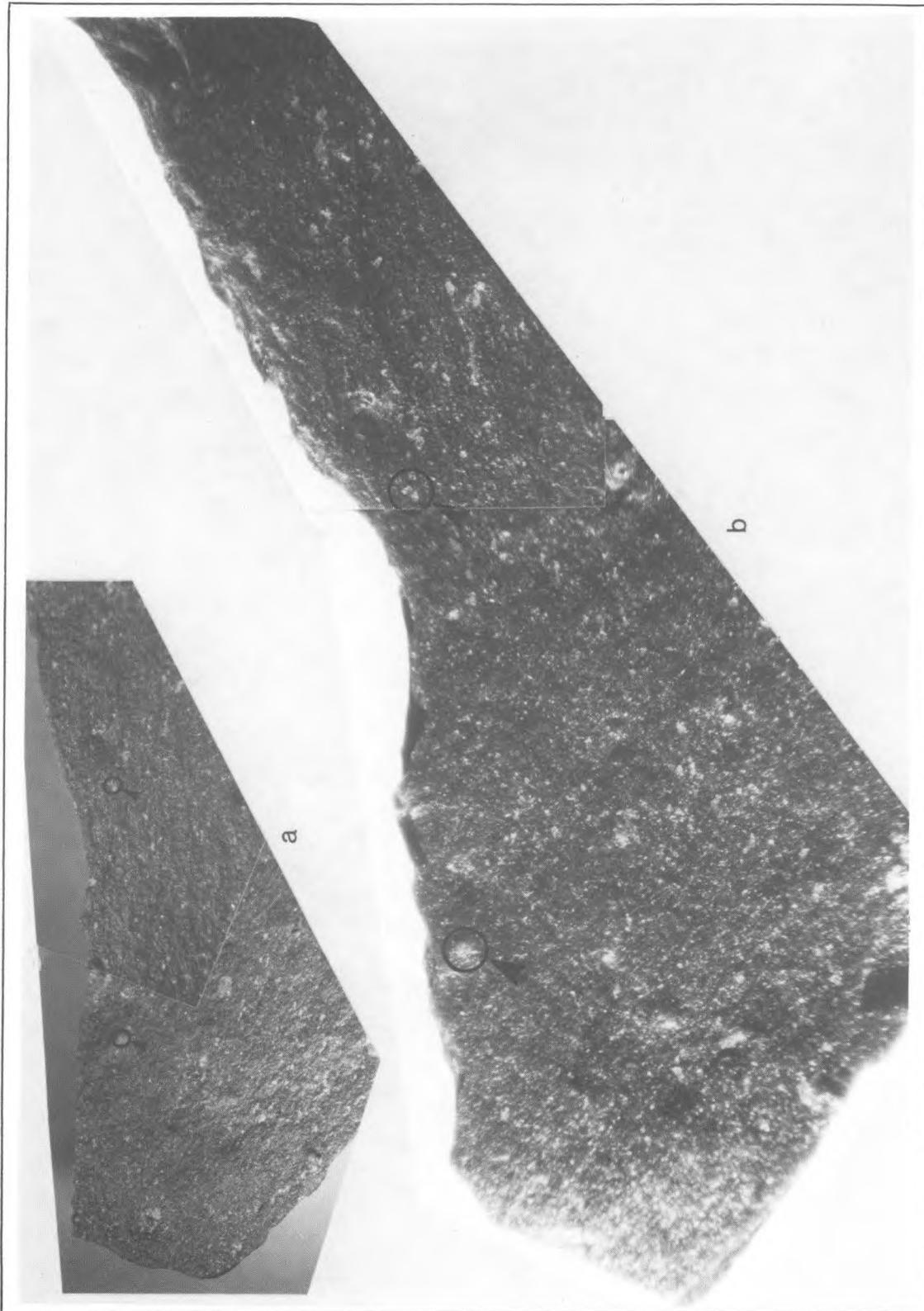


Figure 64. Pre- and post-use photomicrographs of E.T. #9, used to work deer antler (400 strokes).

- (a): Pre-use photo mosaic of the ventral face of E.T. #9 showing concave margin (top) and distal projection tip (magnified 5.5 X);
- (b): Post-use photo mosaic indicating extensive edge loss due to severe crushing on the distal tip and concave margins. Circles mark same microtopographic landmarks indicating amount of edge loss (magnified 9 X).

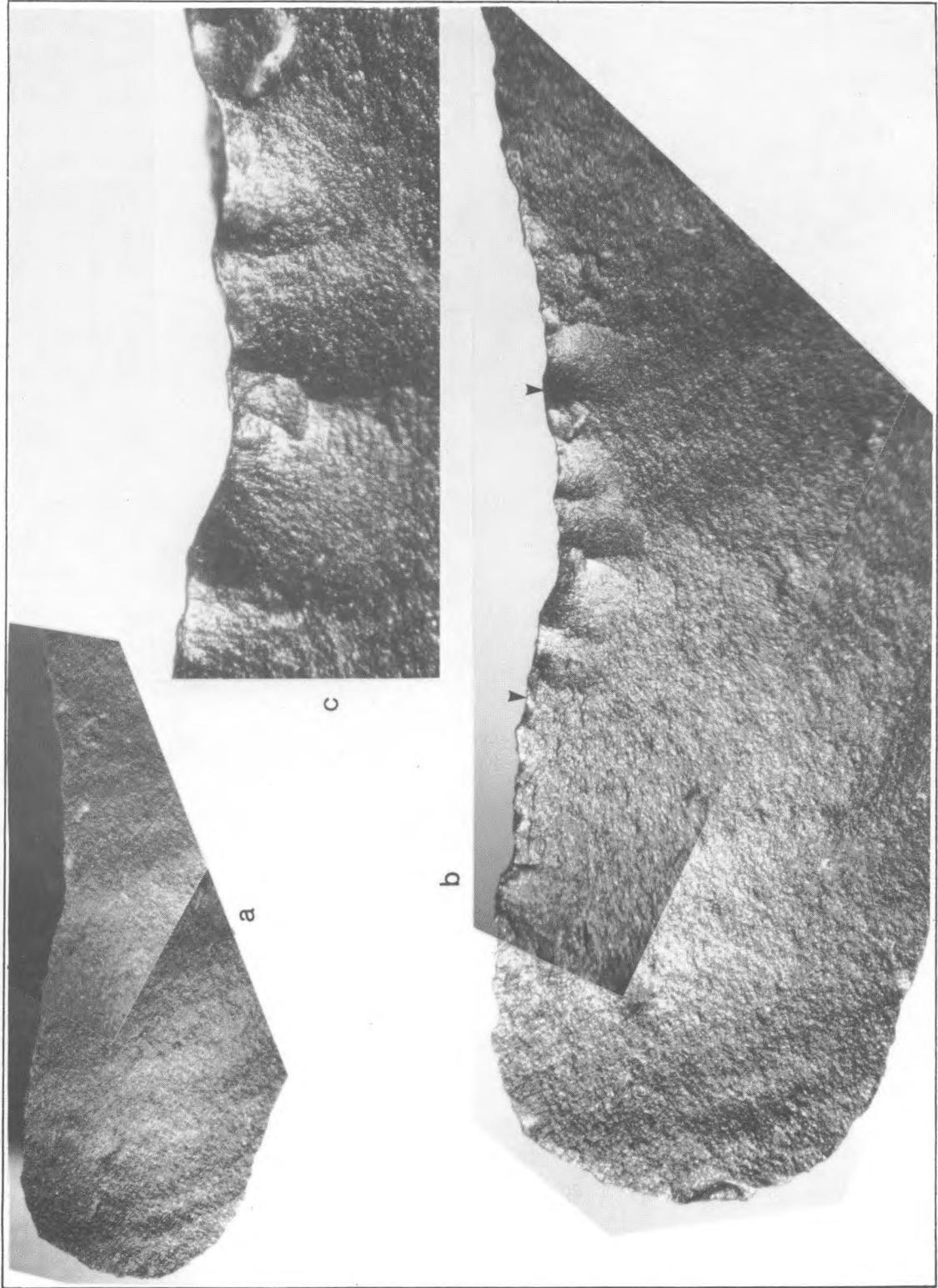


Figure 65. Pre- and post-use photomicrographs of E.T. #10, used to work saskatoon (7,050 strokes).

- (a): Pre-use photo mosaic of the ventral face of E.T. #10 showing concave margin (top) and distal projection tip (magnified 5.5 X);
- (b): Post-use photo mosaic indicating contiguous superposed microflake scar pattern, moderately bright polish, and slight crushing along the medial-distal section of the concave margin edge (magnified 10 X). Arrows indicate edge segment depicted in (c).
- (c): Detail of pronounced edge rounding and smoothing, and polish on the edge segment indicated in (b) (magnified 22 X).

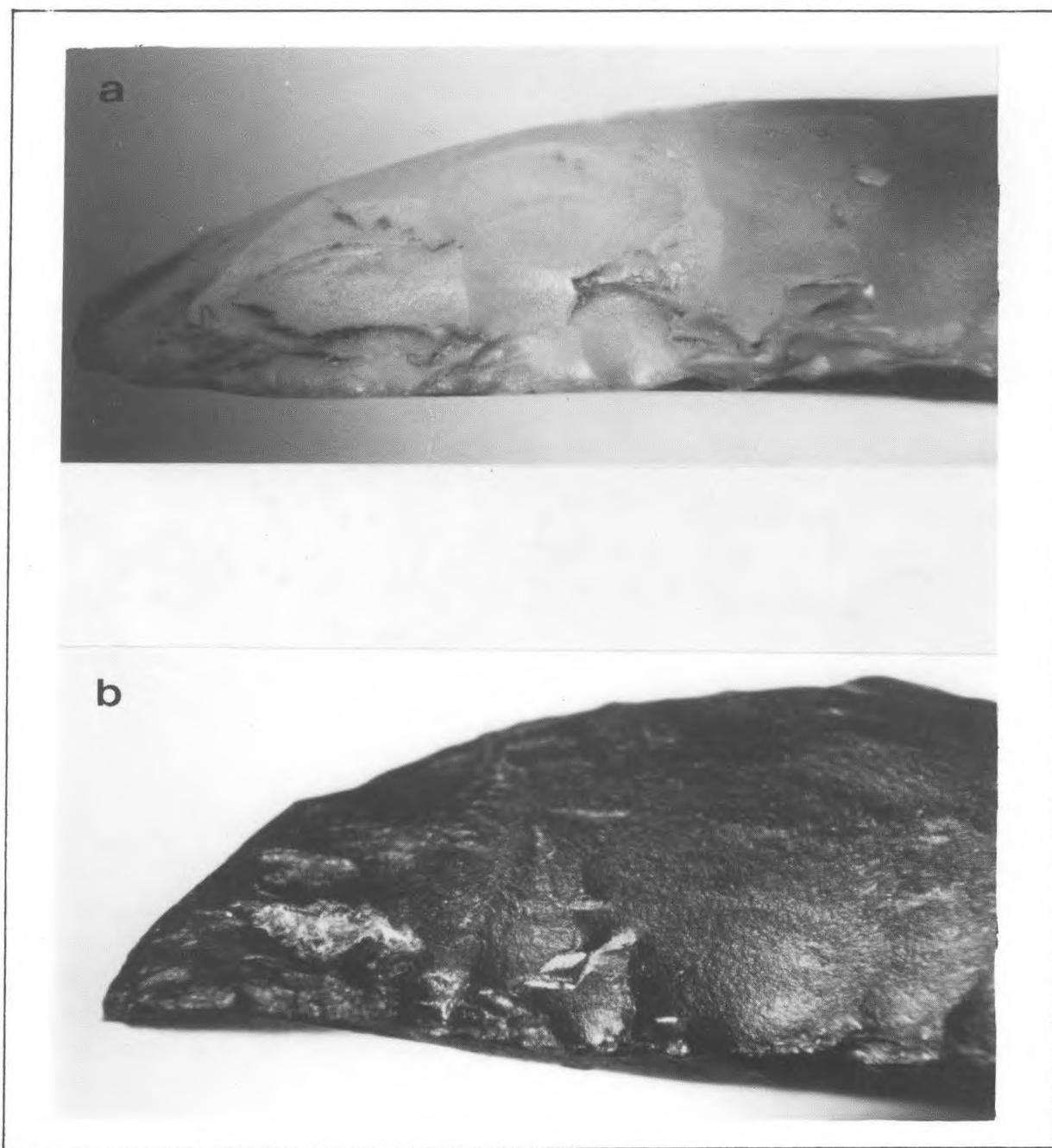


Figure 66. Plant resin residue deposits trapped in flake scars on the dorsal face of E.T. #1 (a) and E.T. #10 (b) after having been cleaned thoroughly with acetone. These residue deposits are identical to those observed on most of the prehistoric specimens examined during the residue analysis. Magnified 9.5 X.