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# Clovis intentional bifacial overshot flaking: Two replica examples

Bruce Bradley

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## Supplemental Information

### Solutrean sample

Well-documented large samples of Solutrean bifaces are generally not available for historical reasons. The sample used here was analyzed personally (with Dennis Stanford and Pegi Jodry). All pieces deemed complete enough to represent French Solutrean biface production technology were selected without regard to their physical traits. Pieces were not individually catalogued and did not have individual numbers, so are not listed as such in this table.

Table S-1. Solutrean\* laurel leaf overshot flake scars

| Phase         | 1 Face     | 2 Faces   | Present    | Absent     | Totals     |
|---------------|------------|-----------|------------|------------|------------|
| Early         | 15 (22.4%) | 8 (40.0%) | 23 (26.4%) | 16 (15.2%) | 39         |
| Middle        | 30 (44.8%) | 6 (30.0%) | 36 (41.4%) | 30 (28.6%) | 66         |
| Late          | 13 (19.4%) | 3 (15.0%) | 16 (18.4%) | 25 (24.0%) | 41         |
| Finished**    | 9 (13.4%)  | 3 (15.0%) | 12 (13.8%) | 34 (32.4%) | 46         |
| <b>Totals</b> | <b>67</b>  | <b>20</b> | <b>87</b>  | <b>105</b> | <b>192</b> |

\* From the collections of Laugerie Haute West and Forneau du Diable, Musée National de Préhistoire, Les Eyzies-de-Tayac, France. Some pieces are fragmentary.

\*\* Only includes those pieces considered not to have been reworked.

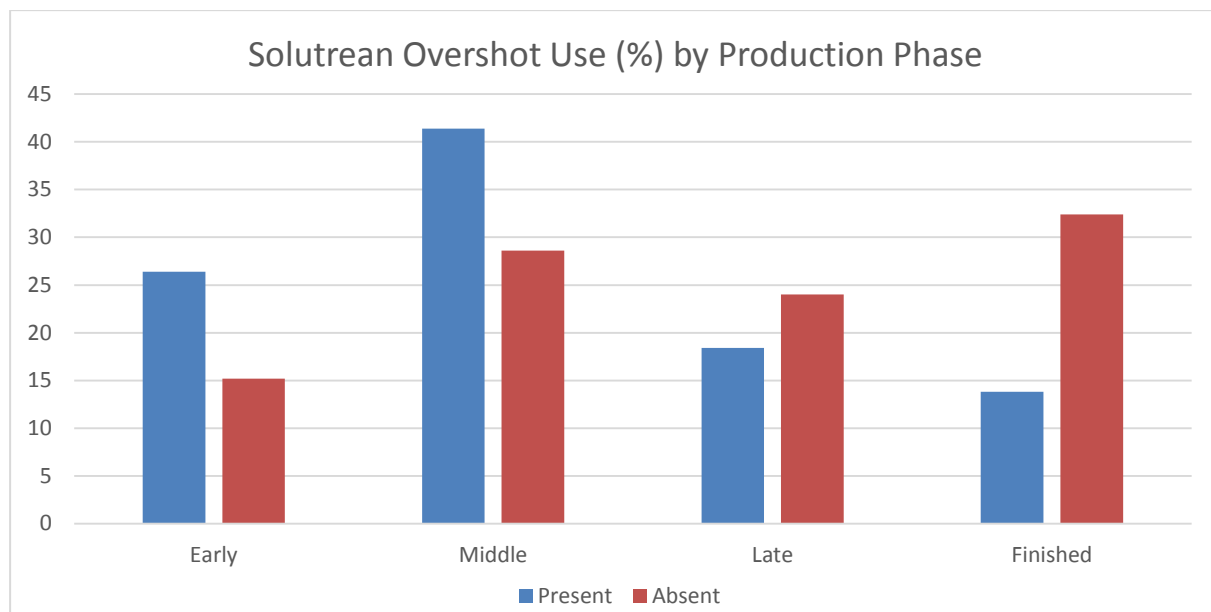


Figure S-1. Solutrean overshot use (%) by production phase.

Table S-2. Clovis\* biface overshot flake scars.

| Phase         | 1 Face     | 2 Faces    | Present    | Absent     | Totals     |
|---------------|------------|------------|------------|------------|------------|
| Early         | 12 (11.3%) | 8 (13.8%)  | 20 (12.2%) | 10 (8.6%)  | 30         |
| Middle        | 45 (42.5%) | 32 (55.2%) | 77 (47.0%) | 53 (45.3%) | 130        |
| Late          | 28 (26.4%) | 12 (20.7%) | 40 (24.4%) | 35 (29.9%) | 75         |
| Finished**    | 21 (19.8%) | 6 (10.3%)  | 27 (16.5%) | 19 (16.2%) | 46         |
| <b>Totals</b> | <b>106</b> | <b>58</b>  | <b>164</b> | <b>117</b> | <b>281</b> |

\* Counts derived from Bradley *et al.* (2010: table 3.1), Frison & Bradley (1999), Waters & Jennings (2015: table 23) and personal observation. All pieces were reclassified to conform with the reduction phases defined by Bradley *et al.* (2010:79- 106). See Bradley *et al.* (2010: table 3.3) for the relationships between this system and others.

\*\* Only includes those pieces considered not to have been reworked.

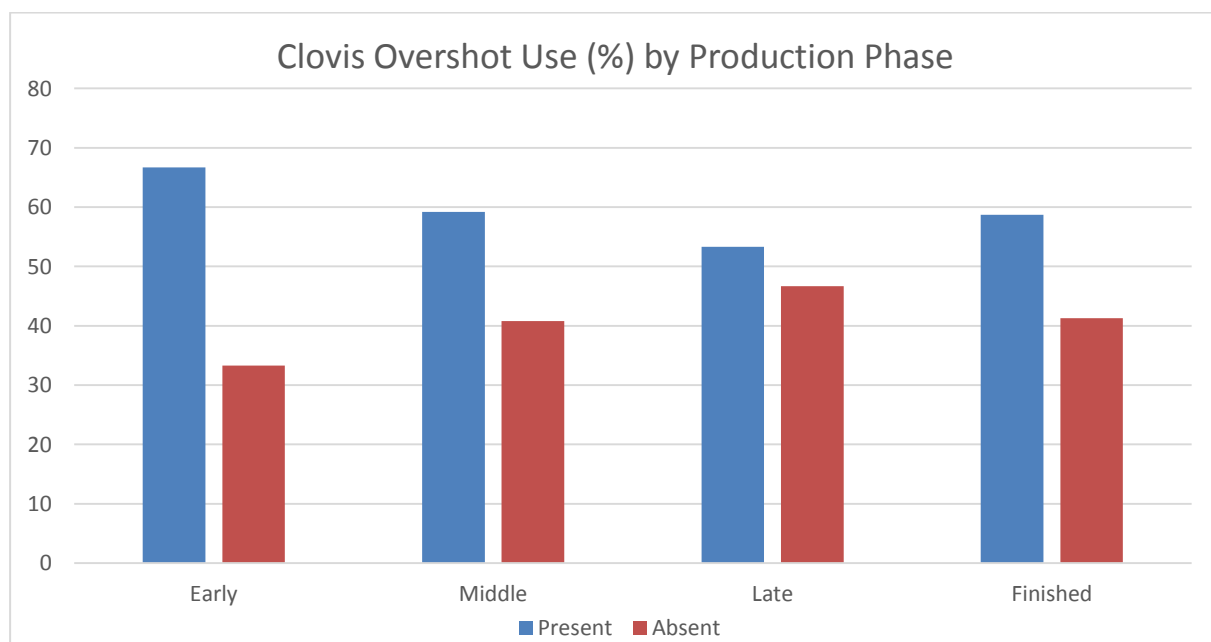


Figure S-2. Clover overshot use (%) by production phase.

### Clovis sample

This sample was chosen to generally represent the range of Clovis technologies as seen at both a manufacturing site (Gault) and three widely spaced caches (Hogeye-Central Texas; Fenn-Northeast Utah and East Wenatchee - Central Washington). Caches were chosen because they have the greatest proportion of unfinished and unworked examples. I recognize that they may also represent extraordinary pieces whose production technology may have been exceptional as well.

Table S-3. Clovis sample.

| Assemblage   | Artifact numbers by production phase |   |   |   |
|--|--------------------------------------|---|---|---|
|  | Early                                | Middle  | Late  | Finished  |
| General Clovis,<br>(Bradley et al.<br>2010:82-93)          |                                      | See Tables 3.4,3.5 and 3.6  |   | None  |
| Fenn Cache,<br>(Frison and<br>Bradley 1999)                | 105, 109,<br>110,<br>122,124         | 101, 102, 103, 104,<br>106, 112, 113, 114,<br>115, 116, 117, 118,<br>119, 123, 125, 126,<br>127, 128, 129, 130,<br>132, 133, 134, 135 | 106, 131,<br>136, 137   | 107, 120, 121, 138,<br>139, 140, 141, 142,<br>143, 144, 145, 146,<br>147, 148, 149, 150,<br>153, 154, 155 |
| Hogeye Cache,<br>(Waters and<br>Jennings 2015<br>Table 23) | None                                 | 1, 5, 10, 11, 15, 25, 26,<br>28, 30, 33, 38, 39, 430,<br>41   | 2, 3, 8, 9,<br>12, 14, 16,<br>18, 20, 22,<br>23, 24, 29,<br>31, 35, 37,<br>42 | 4, 7, 17, 21, 27, 34,<br>43, 44, 45, 46, 47,<br>48, 49, 50, 51, 52,<br>53                                 |
| East Wenatchee<br>Cache (personal<br>analysis)             | 505, 509,<br>514, 515,<br>518, 520   | 321, 510, 511, 512,<br>513, 517   | 504, 506  | 325, 326, 327, 328,<br>501, 502, 503, 506,<br>507, 508  |

Table S-4. Fenn Cache overshot flake scars. Face 1 is on the left in the publication figures.

| Specimen#       | Phase  | Overshot Flake Scars |          |          |
|-----------------|--------|----------------------|----------|----------|
|                 |        | Face 1               | Face 2   | Total    |
| 105             | Early  | 1                    | 1        | 2        |
| 109             | Early  | 0                    | 1        | 1        |
| 110             | Early  | 2                    | 1        | 3        |
| 122             | Early  | 1                    | 0        | 1        |
| 124             | Early  | 1                    | 1        | 2        |
| <b>subtotal</b> |        | <b>5</b>             | <b>4</b> | <b>9</b> |
| 101             | Middle | 1                    | 2        | 3        |
| 102             | Middle | 1                    | 2        | 3        |
| 103             | Middle | 0                    | 0        | 0        |
| 104             | Middle | 3                    | 1        | 4        |
| 112             | Middle | 1                    | 2        | 3        |
| 113             | Middle | 0                    | 0        | 0        |
| 114             | Middle | 1                    | 2        | 3        |

| Specimen#       | Phase    | Overshot Flake Scars |           |           |
|-----------------|----------|----------------------|-----------|-----------|
|                 |          | Face 1               | Face 2    | Total     |
| 115             | Middle   | 1                    | 0         | 1         |
| 116             | Middle   | 0                    | 0         | 0         |
| 117             | Middle   | 0                    | 0         | 0         |
| 118             | Middle   | 1                    | 0         | 1         |
| 119             | Middle   | 0                    | 0         | 0         |
| 123             | Middle   | 1                    | 0         | 1         |
| 125             | Middle   | 0                    | 0         | 0         |
| 126             | Middle   | 0                    | 0         | 0         |
| 127             | Middle   | 0                    | 1         | 1         |
| 128             | Middle   | 0                    | 1         | 1         |
| 129             | Middle   | 0                    | 0         | 0         |
| 130             | Middle   | 1                    | 0         | 1         |
| 132             | Middle   | 0                    | 0         | 0         |
| 133             | Middle   | 0                    | 0         | 0         |
| 134             | Middle   | 0                    | 0         | 0         |
| 135             | Middle   | 0                    | 0         | 0         |
| <b>subtotal</b> |          | <b>11</b>            | <b>11</b> | <b>22</b> |
| 106             | Late     | 0                    | 0         | 0         |
| 131             | Late     | 0                    | 1         | 1         |
| 136             | Late     | 1                    | 0         | 1         |
| 137             | Late     | 0                    | 1         | 1         |
| <b>subtotal</b> |          | <b>1</b>             | <b>2</b>  | <b>3</b>  |
| 107             | Finished | 0                    | 1         | 1         |
| 120             | Finished | 0                    | 1         | 1         |
| 121             | Finished | 0                    | 0         | 0         |
| 138             | Finished | 0                    | 0         | 0         |
| 139             | Finished | 1                    | 1         | 2         |
| 140             | Finished | 3                    | 1         | 4         |
| 141             | Finished | 0                    | 0         | 0         |
| 142             | Finished | 1                    | 0         | 1         |
| 143             | Finished | 1                    | 1         | 2         |
| 144             | Finished | 3                    | 0         | 3         |
| 145             | Finished | 3                    | 2         | 5         |
| 146             | Finished | 0                    | 0         | 0         |
| 147             | Finished | 1                    | 0         | 1         |
| 148             | Finished | 1                    | 0         | 1         |
| 149             | Finished | 1                    | 1         | 2         |
| 150             | Finished | 0                    | 0         | 0         |
| 153             | Finished | 1                    | 1         | 2         |
| 154             | Finished | 2                    | 0         | 2         |
| 155             | Finished | 0                    | 0         | 0         |
| <b>subtotal</b> |          | <b>18</b>            | <b>9</b>  | <b>27</b> |
| <b>Totals</b>   |          | <b>35</b>            | <b>25</b> | <b>58</b> |

Table S-5. East Wenatchee Cache overshot flake scars.

| Specimen#       | Phase    | Overshot Flake Scars |           |           |
|-----------------|----------|----------------------|-----------|-----------|
|                 |          | Face 1               | Face 2    | Total     |
| 505             | Early    | 0                    | 2         | 2         |
| 509             | Early    | 1                    | 0         | 1         |
| 514             | Early    | 0                    | 0         | 0         |
| 515             | Early    | 0                    | 0         | 0         |
| 518             | Early    | 1                    | 0         | 1         |
| 520             | Early    | 0                    | 0         | 0         |
| <b>subtotal</b> |          | <b>2</b>             | <b>2</b>  | <b>4</b>  |
| 321             | Middle   | 0                    | 2         | 2         |
| 510             | Middle   | 1                    | 1         | 2         |
| 511             | Middle   | 1                    | 0         | 1         |
| 512             | Middle   | 3                    | 3         | 6         |
| 513             | Middle   | 0                    | 0         | 0         |
| 517             | Middle   | 0                    | 1         | 1         |
| <b>subtotal</b> |          | <b>5</b>             | <b>7</b>  | <b>12</b> |
| 504             | Late     | 0                    | 3         | 3         |
| 506             | Late     | 2                    | 0         | 2         |
| <b>subtotal</b> |          | <b>2</b>             | <b>3</b>  | <b>5</b>  |
| 4               | Finished | 0                    | 3         | 3         |
| 325             | Finished | 0                    | 0         | 0         |
| 326             | Finished | 0                    | 4         | 4         |
| 327             | Finished | 2                    | 0         | 2         |
| 328             | Finished | 1                    | 0         | 1         |
| 501             | Finished | 4                    | 5         | 9         |
| 502             | Finished | 1                    | 0         | 1         |
| 503             | Finished | 1                    | 1         | 2         |
| 506             | Finished | 2                    | 1         | 3         |
| 507             | Finished | 0                    | 0         | 0         |
| 508             | Finished | 0                    | 0         | 0         |
| <b>subtotal</b> |          | <b>11</b>            | <b>14</b> | <b>25</b> |
| <b>Totals</b>   |          | <b>20</b>            | <b>26</b> | <b>46</b> |