SM Table 1. Mammoth and Mastodon δ13C, δ15N (collagen) data.

| **ID** | **Locality Name** | **Latitude** | **Longitude** | **Repository** | **Taxon** | **Chronozone** | **IndividualCode** | **Date Type** | **Lab Number** | **Calibrated age range,**  **2-sigma (BP)** | **Collagen %C** | **Collagen %N** | **C:N** | **δ13C** | **δ15N** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Conway | 40.03 | -83.76 | OSU | *Mammut americanum* | Allerod | Conway 1 | single date | AA102535 | 14191 - 13553 | 38 | 11 | 3.4 | -22.1 | 3.5 |
| 2 | Rodney | 42.56 | -81.68 | ROM | *Mammut americanum* | Allerod | Rodney 1 | single date | AA102528 | 14116 - 13545 | 29 | 9 | 3.3 | -19.9 | 2.6 |
| 3 | Anderson Farm | 40.75 | -86.76 | InSM | *Mammut americanum* | Allerod | Anderson Farm 1 | single date | AA100643 | 14024 - 13468 | 32 | 9 | 3.4 | -21.5 | 2.2 |
| 4 | Kolarik | 41.18 | -86.59 | InSM | *Mammut americanum* | Allerod | Kolarik 1 | single date | AA100653 | 13983 - 13442 | 35 | 11 | 3.3 | -20.8 | 2.6 |
| 5 | Toonen Farm | 43.02 | -81.24 | ROM | *Mammut americanum* | Allerod | Toonen 1 | single date | AA84989 | 13968 - 13428 | 37 | 12 | 3.1 | -20.7 | 4.6 |
| 6 | Manns Chapel | 40.33 | -87.65 | ISM | *Mammut americanum* | Allerod | Manns Chapel 1 | single date | AA97969 | 13968 - 13429 | 37 | 11 | 3.4 | -20.7 | 7.4 |
| 7 | Crabtree | 40.17 | -83.79 | OHS | *Mammut americanum* | Allerod | Crabtree 1 | single date | AA102536 | 13951 - 13406 | 34 | 10 | 3.3 | -21 | 3.6 |
| 8 | Bamford Farm | 41.48 | -88.30 | FMNH | *Mammut americanum* | Allerod | Bamford Farm 1 | single date | AA98897UF | 13722 - 13257 | 41 | 12 | 3.3 | -20.7 | 2.4 |
| 9 | Bamford Farm | 41.48 | -88.30 | FMNH | *Mammut americanum* | Allerod | Bamford Farm 3 | single date | AA98898 | 13442 - 13060 | 35 | 11 | 3.3 | -21.3 | 3.3 |
| 10 | Benedict | 41.22 | -86.42 | InSM | *Mammut americanum* | Allerod | Benedict 3 | single date | AA100639 | 13740 - 13246 | 34 | 10 | 3.3 | -21.5 | 3.2 |
| 11 | Benedict | 41.22 | -86.42 | InSM | *Mammut americanum* | Allerod | Benedict 2 | single date | AA100640 | 13458 - 13078 | 32 | 10 | 3.3 | -20.8 | 2.9 |
| 12 | Benedict | 41.22 | -86.42 | InSM | *Mammut americanum* | Allerod | Benedict 1 | single date | AA100641 | 13733 - 13232 | 35 | 11 | 3.3 | -21.1 | 2.3 |
| 13 | Boney Spring | 38.11 | -93.37 | ISM | *Mammut americanum* | Allerod | Boney Spring 1 | single date | AA97874 | 13730 - 13281 | 33 | 10 | 3.2 | -20.7 | 8.5 |
| 14 | Boney Spring | 38.11 | -93.37 | ISM | *Mammut americanum* | Allerod | Boney Spring 3 | single date | AA101549 | 13764 - 13251 | 40 | 13 | 3.2 | -20.9 | 7.6 |
| 15 | Bothwell Farm | 41.32 | -87.20 | InSM | *Mammut americanum* | Allerod | Bothwell 3 | single date | AA100636 | 13591 - 13145 | 34 | 10 | 3.3 | -21.1 | 3 |
| 16 | Bothwell Farm | 41.32 | -87.20 | InSM | *Mammut americanum* | Allerod | Bothwell 4 | single date | AA100635 | 13546 - 13096 | 35 | 11 | 3.3 | -21.5 | 2.8 |
| 17 | Bothwell Farm | 41.32 | -87.20 | InSM | *Mammut americanum* | Allerod | Bothwell 1 | single date | AA100638 | 13769 - 13299 | 33 | 10 | 3.3 | -21.4 | 2.8 |
| 18 | Mud Lake | 42.51 | -88.03 | KPM | *Mammut americanum* | Allerod | Mud Lake 1 | single date | AA105158 | 13551 - 13189 | 34 | 11 | 3.2 | -21.5 | 4.8 |
| 19 | Bothwell Farm | 41.32 | -87.20 | InSM | *Mammut americanum* | Allerod | Bothwell 2 | single date | AA100637 | 13550 - 13126 | 30 | 9 | 3.3 | -21.6 | 2.6 |
| 20 | Buesching | 41.15 | -85.26 | InSM | *Mammut americanum* | Allerod | Buesching 1 | single date | AA100650 | 13476 - 13085 | 32 | 10 | 3.3 | -21.4 | 2.8 |
| 21 | Caradoc | 42.87 | -81.43 | OWU | *Mammut americanum* | Allerod | Caradoc 1 | single date | AA84980 | 13171 - 12741 | 35 | 11 | 3.1 | -19.9 | 3.6 |
| 22 | Day | 41.34 | -86.31 | InSM | *Mammut americanum* | Allerod | Day 1 | single date | AA100651 | 13201 - 12753 | 26 | 7 | 3.5 | -21.9 | 2.9 |
| 23 | Four Mile Creek | 41.73 | -93.57 | IaSHS | *Mammut americanum* | Allerod | Four Mile Creek 1 | single date | AA101539 | 13187 - 12748 | 29 | 9 | 3.2 | -20.9 | 4.9 |
| 24 | Green Valley | 40.41 | -89.64 | ISM | *Mammut americanum* | Allerod | Green Valley 1 | single date | AA97968UF | 13223 - 12738 | 38 | 11 | 3.4 | -20.8 | 7.9 |
| 25 | Kewanna | 41.05 | -86.37 | InSM | *Mammut americanum* | Allerod | Kewanna 1 | single date | AA100654 | 13406 - 12885 | 33 | 10 | 3.2 | -21.4 | 6.2 |
| 26 | McGill | 40.17 | -83.75 | OHS | *Mammut americanum* | Allerod | McGill 1 | single date | AA102539 | 13471 - 13061 | 34 | 10 | 3.3 | -20.3 | 3.2 |
| 27 | Overmyer | 41.08 | -86.36 | CMC | *Mammut americanum* | Allerod | Overmyer 1 | single date | AA102533 | 13073 - 12726 | 35 | 13 | 2.8 | -22.5 | 2.8 |
| 28 | Paris Township | 42.65 | -87.92 | KPM | *Mammut americanum* | Allerod | Paris 1 | single date | AA105159 | 13459 - 13110 | 37 | 11 | 3.3 | -21 | 4.2 |
| 29 | Point Edward | 42.99 | -82.41 | ROM | *Mammut americanum* | Allerod | Pt Edward 1 | single date | AA102527 | 13408 - 12885 | 37 | 11 | 3.4 | -19.7 | 4.6 |
| 30 | Shawneetown | 37.69 | -88.14 | ISM/FMNH | *Mammut americanum* | Allerod | Shawneetown 1 | single date | AA98902 | 13477 - 13085 | 41 | 12 | 3.3 | -21.4 | 10.1 |
| 31 | Sidwell Farm | 40.06 | -90.01 | ISM | *Mammut americanum* | Allerod | Sidwell Farm 1 | single date | AA100632 | 13087 - 12730 | 32 | 10 | 3.3 | -21.6 | 5.8 |
| 32 | Sterling | 40.47 | -96.41 | UNSM | *Mammut americanum* | Allerod | Sterling 1 | single date | AA105156 | 13534 - 13143 | 36 | 11 | 3.2 | -21.1 | 7.4 |
| 33 | Glen Ellen/Wheaton | 41.88 | -88.06 | WHEAT | *Mammut americanum* | Allerod | Wheaton 1 | single date | AA101532 | 13547 - 13237 | 34 | 10 | 3.3 | -22.4 | 3.2 |
| 34 | Neath farm | 43.08 | -89.11 | UWZP | *Mammut americanum* | Allerod | Neath Farm 1 | single date | AA106380 | 13290 - 13055 | 40 | 12 | 3.3 | -21.8 | 2.8 |
| 35 | Schimelphfenig Bog West | 43.04 | -89.33 | UWZP | *Mammut americanum* | Allerod | Schimelphfenig Bog 2 | single date | AA106382 | 13270 - 12885 | 39 | 11 | 3.4 | -21.2 | 2.6 |
| 36 | Grandville | 42.90 | -85.78 | GRPM | *Mammut americanum* | Bolling | Grandville 1 | single date | AA102531 | 14666 - 13735 | 42 | 13 | 3.3 | -19.9 | 3.1 |
| 37 | Aker | 41.34 | -86.31 | InSM | *Mammut americanum* | Bolling | Aker 1 | single date | AA100652 | 15050 - 14086 | 26 | 8 | 3.4 | -20.8 | 4.2 |
| 38 | Delaware | 42.91 | -81.42 | OWU | *Mammut americanum* | Bolling | Delaware 1 | single date | AA84998 | 15013 - 14033 | 35 | 11 | 3.1 | -20.1 | 2.2 |
| 39 | Wellandport | 43.01 | -79.28 | ROM | *Mammut americanum* | Bolling | Wellandport 1 | single date | AA102530 | 14764 - 13761 | 41 | 12 | 3.3 | -19.8 | 2.6 |
| 40 | Moorland | 43.23 | -85.99 | GRPM | *Mammut americanum* | Bolling | Moorland 1 | single date | AA102532 | 14695 - 13745 | 28 | 7 | 3.9 | -20.6 | 4.3 |
| 41 | Gavers | 40.73 | -80.87 | OHS | *Mammut americanum* | Bolling | Gavers 1 | single date | AA102540 | 14438 - 13585 | 33 | 10 | 3.3 | -21.1 | 6.2 |
| 42 | Farrington | 39.56 | -84.64 | OHS | *Mammut americanum* | Oldest Dryas | Farrington 1 | single date | AA102538 | 15241 - 14225 | 38 | 12 | 3.3 | -20.7 | 3.4 |
| 43 | JJ Charolais Ranch | 40.11 | -81.40 | OHS | *Mammut americanum* | Oldest Dryas | Charolais Ranch 1 | single date | AA102537 | 15845 - 15245 | 38 | 12 | 3.3 | -19.4 | 4.5 |
| 44 | Reeker | 40.19 | -85.66 | InSM | *Mammut americanum* | Oldest Dryas | Reeker 1 | single date | AA100657 | 15334 - 14292 | 36 | 11 | 3.3 | -21.1 | 4.1 |
| 45 | Shafer | 40.45 | -87.25 | InSM | *Mammut americanum* | Oldest Dryas | Shafer 1 | single date | AA100655 | 15271 - 14248 | 38 | 11 | 3.4 | -20.6 | 3.6 |
| 46 | Porter Shelter | 38.28 | -90.20 | SIU | *Mammut americanum* | Oldest Dryas | Porter Shelter 1 | single date | AA106430 | 15085 - 14249 | 38 | 12 | 3.3 | -20.9 | 7.4 |
| 47 | Chester | 37.90 | -89.83 | ISM | *Mammut americanum* | Pre-LGM | Chester 1 | single date | AA97887UF | 35328 - 31382 | 41 | 12 | 3.4 | -20.5 | 5.2 |
| 48 | 13WD0, Woodbury County | 42.32 | -95.98 | SANM | *Mammut americanum* | Pre-LGM | Woodbury County 1 | single date | AA101531 | 27388 - 25869 | 24 | 6 | 3.7 | -21.9 | 5.2 |
| 49 | Kefler-White pit | 41.56 | -93.54 | IaSHS | *Mammut americanum* | Pre-LGM | Kefler-White 1 | single date | AA101538 | 37451 - 49567 | 28 | 8 | 3.3 | -20.9 | 8.3 |
| 50 | Couch Cave | 38.14 | -90.25 | FMNH | *Mammut americanum* | Pre-LGM | Couch Cave 1 | single date | AA98903 | >50000 | 34 | 10 | 3.4 | -19.9 | 6.8 |
| 51 | Renison | 50.97 | -81.13 | ROM | *Mammut americanum* | Pre-LGM | Renison 1 | single date | AA102529 | >50000 | 32 | 10 | 3.3 | -20.8 | 4.8 |
| 52 | Shaw | 39.14 | -84.44 | CMC | *Mammut americanum* | Pre-LGM | Hyde Park 1 | single date | AA102534 | >50000 | 41 | 12 | 3.3 | -21.1 | 6 |
| 53 | Delco Farm | 41.69 | -86.97 | FMNH | *Mammut americanum* | Younger Dryas | Delco Farm 1 | single date | AA98899 | 12850 - 12640 | 40 | 12 | 3.3 | -20.9 | 2.4 |
| 54 | Boaz | 43.33 | -90.53 | UWZP | *Mammut americanum* | Younger Dryas | Boaz 1 | single date | AA106383 | 12810 - 12560 | 33 | 9 | 3.5 | -20.3 | 3.3 |
| 55 | Bamford Farm | 41.48 | -88.30 | FMNH | *Mammuthus* | Allerod | Bamford Farm 2 | single date | AA97966UF | 14279 - 13588 | 36 | 11 | 3.4 | -21.4 | 4.8 |
| 56 | Prillwitz | 41.99 | -86.30 | AU | *Mammuthus* | Allerod | Prillwitz 1 | single date | AA104824 | 13389 - 13021 | 36 | 11 | 3.2 | -20.4 | 5.1 |
| 57 | Queenston Heights | 43.12 | -79.06 | ROM | *Mammuthus* | Allerod | Queenston Heights 1 | single date | AA102526 | 13994 - 13408 | 31 | 9 | 3.4 | -19.5 | 8.4 |
| 58 | Hershberger | 41.71 | -85.56 | InSM | *Mammuthus* | Bolling | Herschberger 1 | single date | AA100649 | 15075 - 14073 | 29 | 9 | 3.4 | -19.9 | 5.8 |
| 59 | Belleview | 39.35 | -90.76 | ISM | *Mammuthus* | LGM I | Belleview 1 | single date | AA97886UF | 22560 - 21457 | 37 | 11 | 3.3 | -20.3 | 8.5 |
| 60 | 13CF1, Dunlap Pit | 41.95 | -95.67 | SANM | *Mammuthus* | LGM I | Roush 1 | single date | AA101542 | 22330 - 21074 | 42 | 5 | 8.1 | -20.2 | 5.9 |
| 61 | Schaeffer Farm | 41.86 | -95.79 | SANM | *Mammuthus* | LGM I | 13HR1 1 | combined date | R\_Combine Locality 13 HR1 Left M3 | 22381 - 21511 | n.a. | n.a. | 3.3 | -20.4 | 8.3 |
| 62 | Painter Creek | 40.23 | -91.22 | ISM | *Mammuthus* | LGM I | Painter Creek 1 | single date | AA97882 | 21837 - 21187 | 38 | 12 | 3.3 | -18.2 | 7.7 |
| 63 | Traer | 42.19 | -92.47 | IaSHS | *Mammuthus* | LGM I | Traer 1 | single date | AA101534 | 20644 - 19610 | 38 | 12 | 3.2 | -21.3 | 8.3 |
| 64 | Boggess Farm | 41.30 | -92.65 | SUI | *Mammuthus* | LGM II | Boggess 1 | single date | AA100658 | 17569 - 16648 | 30 | 9 | 3.3 | -20.6 | 5.5 |
| 65 | Boggess Farm | 41.30 | -92.65 | SUI | *Mammuthus* | LGM II | Boggess 2 | single date | AA105160 | 17526 - 16761 | 32 | 9 | 3.5 | -21.3 | 8.3 |
| 66 | Boggess Farm | 41.30 | -92.65 | SUI | *Mammuthus* | LGM II | Boggess 3 | combined date | R\_Combine Boggess Site Ind#3 | 17635 - 17126 | n.a. | n.a. | 3.3 | -21.4 | 8.3 |
| 67 | Des Moines | 41.62 | -93.61 | IaSHS | *Mammuthus* | LGM II | West Des Moines 1 | single date | AA101536 | 17840 - 16855 | 38 | 12 | 3.2 | -21.2 | 7.6 |
| 68 | Ada Hayden Park | 42.07 | -93.63 | ISU | *Mammuthus* | Oldest Dryas | Ada Hayden 1 | single date | AA104823 | 16023 - 15336 | 35 | 11 | 3.2 | -20.9 | 6.3 |
| 69 | 13CF1, Dunlap Pit | 41.95 | -95.67 | SANM | *Mammuthus* | Oldest Dryas | Roush 1 | single date | AA100633 | 17130 - 16220 | 33 | 10 | 3.4 | -21.0 | 7.6 |
| 70 | Kewanee | 41.43 | -89.91 | UNSM | *Mammuthus* | Oldest Dryas | Kewanee 1 | single date | AA105157 | 16886 - 16162 | 35 | 11 | 3.3 | -22 | 8.5 |
| 71 | Durwood Maas farm | 43.03 | -88.76 | UWZP | *Mammuthus* | Oldest Dryas | Maas Farm 1 | single date | AA104822 | 16230 - 15610 | 35 | 11 | 3.2 | -21.6 | 9.3 |
| 72 | 13WD4 | 42.43 | -95.90 | SANM | *Mammuthus* | Pre-LGM | Correctionville 2 | single date | AA101540 | 43938 - 35595 | 40 | 12 | 3.3 | -20.1 | 8 |
| 73 | Waterloo | 42.50 | -92.34 | IaSHS | *Mammuthus* | Pre-LGM | Waterloo 1 | single date | AA101533 | 27178 - 25826 | 38 | 12 | 3.2 | -19.9 | 8.1 |
| 74 | Henry | 41.13 | -89.34 | ISGS | *Mammuthus* | Pre-LGM | Henry 1 | single date | AA100659 | 26600 - 25237 | 37 | 12 | 3.2 | -20.1 | 9.2 |
| 75 | Bethlehem Quad | 38.53 | -85.45 | InSM | *Mammuthus* | Pre-LGM | Bethlehem 1 | single date | AA100642 | 23684 - 22453 | 31 | 9 | 3.3 | -18.2 | 8.4 |
| 76 | Alton | 40.45 | -87.25 | InSM | *Mammuthus* | Pre-LGM | Alton 1 | single date | AA100644 | 23431 - 22136 | 27 | 8 | 3.3 | -19.1 | 7.2 |