**Supplemental Table 1**. Compound specific δ 13C values for palmitic acid (C16:0) and stearic acid (C18:0) plotted in Figure 4.

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| **Category** | **Species** | **Sample** | **Location** | **δ13C16:0** | **δ13C18:0** | **∆13C** | **Reference** |
| Wild non-ruminant  | *Ursus americanus* (Black bear) | bone  | Canada  | -26.73 | -27.00 | -0.27 | Taché & Craig 2015, Table S2 |
| Wild non-ruminant  | *Castor canadensis* (Beaver) | soft tissue  | Canada  | -31.04 | -31.20 | -0.16 | Taché & Craig 2015, Table S2 |
| Wild non-ruminant  | *Lepus americanus* (Snowshoe hare) | soft tissue  | Canada  | -32.15 | -32.54 | -0.39 | Taché & Craig 2015, Table S2 |
| Wild non-ruminant  | *Procyon lotor* (Racoon) | soft tissue  | Canada  | -29.15 | -28.65 | 0.50 | Taché & Craig 2015, Table S2 |
| Wild non-ruminant  | *Ondatra zibethicu*s (Muskrat) | soft tissue  | Canada  | -33.58 | -33.02 | 0.56 | Taché & Craig 2015, Table S2 |
| Wild non-ruminant  | *Lontra Canadensis* (Otter) | soft tissue  | Canada  | -31.76 | -33.34 | -1.58 | Taché & Craig 2015, Table S2 |
| Wild non-ruminant  | *Lepus americanus* (Snowshoe hare) | muscle tissue | Interior Alaska | -30.0 | -29.6 | 0.4 | Choy et al. 2016, Table S2 |
| Wild non-ruminant  | *Sciurus vulgaris*(Red squirrel) | muscle tissue | Interior Alaska | -26.8 | -27.6 | -0.8 | Choy et al. 2016, Table S2 |
| Wild ruminant  | *Cervus elaphus* (Red deer) | bone  | Poland  | -28.13 | -31.89 | -3.76 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Cervus elaphus* (Red deer) | bone  | Poland  | -27.77 | -31.54 | -3.77 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Cervus elaphus* (Red deer) | bone  | Poland  | -28.78 | -32.98 | -4.20 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Cervus elaphus* (Red deer) | bone  | Poland  | -30.41 | -34.06 | -3.65 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Cervus elaphus* (Red deer) | bone  | Poland  | -29.49 | -33.08 | -3.59 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Cervus elaphus* (Red deer) | bone  | Poland  | -29.16 | -33.43 | -4.27 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Cervus elaphus* (Red deer) | bone  | Poland  | -30.75 | -33.44 | -2.69 | Taché & Craig 2015, Table S2 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Wild ruminant  | *Cervus elaphus* (Red deer) | bone  | Poland  | -29.88 | -33.47 | -3.59 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Cervus elaphus* (Red deer) | bone  | Poland  | -29.31 | -32.69 | -3.38 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Cervus elaphus* (Red deer) | bone  | Poland  | -29.82 | -33.41 | -3.59 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Alces alces* (Moose) | bone  | Canada  | -29.12 | -32.62 | -3.50 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Alces alces* (Moose) | bone  | Canada  | -30.27 | -32.80 | -2.53 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Alces alces* (Moose) | soft tissue  | Canada  | -29.30 | -32.21 | -2.91 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Alces alces* (Moose) | soft tissue  | Canada  | -29.43 | -31.37 | -1.94 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Alces alces* (Moose) | muscle tissue | Interior Alaska | -31.4 | -32.5 | -1.1 | Choy et al. 2016, Table S2 |
| Wild ruminant  | *Odocoileus virginianus* (White-tailed deer) | bone  | Canada  | -29.32 | -31.01 | -1.69 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | Odocoileus virginianus (White-tailed deer) | soft tissue  | Canada  | -29.65 | -31.51 | -1.86 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | Odocoileus virginianus (White-tailed deer) | soft tissue  | Canada  | -29.83 | -30.28 | -0.45 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Rangifer tarandus* (Caribou) | bone  | Canada  | -25.40 | -28.32 | -2.92 | Taché & Craig 2015, Table S2 |
| Wild ruminant  | *Rangifer tarandus* (Caribou) | soft tissue  | Canada  | -24.87 | -26.14 | -1.27 | Taché & Craig 2015, Table S2 |
| Salmonid (Anadromous) | *Oncorhynchus kisutch* (Coho Salmon) | muscle tissue | Interior Alaska | -28.8 | -27.2 | 1.6 | Choy et al. 2016, Table S2 |
| Salmonid (Anadromous) | *Oncorhynchus kisutch* (Coho Salmon) | muscle tissue | Interior Alaska | -28.4 | -26.6 | 1.8 | Choy et al. 2016, Table S2 |
| Salmonid (Anadromous) | *Oncorhynchus kisutch* (Coho Salmon) | muscle tissue | Interior Alaska | -27.8 | -25.6 | 2.2 | Choy et al. 2016, Table S2 |

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| Salmonid (Anadromous) | *Oncorhynchus keta* (Chum Salmon) | muscle tissue | Interior Alaska | -26.8 | -26.0 | 0.8 | Choy et al. 2016, Table S2 |
| Salmonid (Anadromous) | *Oncorhynchus keta* (Chum Salmon) | muscle tissue | Interior Alaska | -26.8 | -25.4 | 1.4 | Choy et al. 2016, Table S2 |
| Salmonid (Anadromous) | *Oncorhynchus keta* (Chum Salmon) | muscle tissue | Interior Alaska | -25.7 | -24.1 | 1.6 | Choy et al. 2016, Table S2 |
| Salmonid (Freshwater) | Salmonidae sp. (Salmon) | charred deposit  | Japan  | -28.01 | -28.72 | -0.71 | Taché & Craig 2015, Table S2 |
| Salmonid (Freshwater)  | Salmonidae sp. (Salmon) | charred deposit  | Japan  | -25.22 | -26.79 | -1.57 | Taché & Craig 2015, Table S2 |
| Salmonid (Freshwater)  | Salmonidae sp. (Salmon) | charred deposit  | Japan  | -26.01 | -27.33 | -1.32 | Taché & Craig 2015, Table S2 |
| Salmonid (Freshwater)  | Salmonidae sp. (Trout) | charred deposit  | Japan  | -26.74 | -26.72 | 0.02 | Taché & Craig 2015, Table S2 |
| Salmonid (Freshwater)  | Salmonidae sp. (Trout) | charred deposit  | Japan  | -27.64 | -27.88 | -0.24 | Taché & Craig 2015, Table S2 |
| Salmonid (Freshwater)  | Salmonidae sp. (Trout) | charred deposit  | Japan  | -25.83 | -26.24 | -0.41 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Rhynchocypris lagowskii* (Amur minnow) | charred deposit  | Japan  | -27.43 | -28.13 | -0.70 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Pseudorasbora parva* (Topmouth gudgeon) | charred deposit  | Japan  | -26.95 | -26.64 | 0.31 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Anguilla anguilla* (Eel) | soft tissue  | Denmark  | -28.96 | -29.22 | -0.26 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Esox lucius* (Pike) | soft tissue  | Denmark  | -35.59 | -35.84 | -0.25 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Tinca tinca* (Tench) | soft tissue  | Denmark  | -28.53 | -29.6 | -1.07 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Tinca tinca* (Tench) | soft tissue  | Denmark  | -25.04 | -27.14 | -2.10 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Tinca tinca* (Tench) | soft tissue  | Denmark  | -37.95 | -37.27 | 0.68 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Ictalurus punctatus* (Channel catfish) | soft tissue  | Canada  | -27.41 | -27.43 | -0.02 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Ictalurus punctatus* (Channel catfish) | soft tissue  | Canada  | -26.07 | -25.39 | 0.68 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Ictalurus punctatus* (Channel catfish) | soft tissue  | Canada  | -26.71 | -27.16 | -0.45 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Ictalurus punctatus* (Channel catfish) | soft tissue  | Canada  | -26.15 | -26.21 | -0.06 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Ictalurus punctatus* (Channel catfish) | soft tissue  | Canada  | -24.75 | -24.81 | -0.06 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Ictalurus punctatus* (Channel catfish) | soft tissue  | Canada  | -26.04 | -26.38 | -0.34 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Microgadus tomcod* (Tomcod) | soft tissue  | Canada  | -34.38 | -34.63 | -0.25 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Microgadus tomcod* (Tomcod) | soft tissue  | Canada  | -34.19 | -33.95 | 0.24 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Microgadus tomcod* (Tomcod) | soft tissue  | Canada  | -33.86 | -33.41 | 0.45 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Microgadus tomcod* (Tomcod) | soft tissue  | Canada  | -33.35 | -33.28 | 0.07 | Taché & Craig 2015, Table S2 |
| Freshwater  | *Microgadus tomcod* (Tomcod) | soft tissue  | Canada  | -32.58 | -33.10 | -0.52 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Gymnocranius euanus* (Sea bream) | flesh  | Japan  | -22.1 | -21.77 | 0.33 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Gymnocranius euanus* (Sea bream) | flesh  | Japan  | -22.36 | -22.19 | 0.17 | Taché & Craig 2015, Table S2 |
| Marine Organism | Sebastes sp. (Rockfish) | flesh  | Japan  | -23.38 | -22.76 | 0.62 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Mugil cephalus* (Flathead mullet)  | flesh  | Japan  | -21.6 | -20.97 | 0.63 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Genyonemus lineatus* (Croaker) | flesh  | Japan  | -21.45 | -21.09 | 0.36 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Myoxocephalus scorpius* (Bull trout) | flesh  | Denmark  | -16.89 | -17.89 | -1.00 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Gadus morhua* (Atlantic cod) | flesh  | Denmark  | -22.73 | -22.19 | 0.54 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Gadus morhua* (Atlantic cod) | flesh  | Denmark  | -22.74 | -24.12 | -1.38 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Gadus morhua* (Atlantic cod) | flesh  | Denmark  | -22.04 | -24.45 | -2.41 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Zoarces viviparus* (Eelpout) | flesh  | Denmark  | -19.43 | -21.01 | -1.58 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Zoarces viviparus* (Eelpout) | flesh  | Denmark  | -21.15 | -21.34 | -0.19 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Platichthys flesus* (European flounder) | flesh  | Denmark  | -18.51 | -19.82 | -1.31 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Pleuronectes platessa* (Plaice) | flesh  | Denmark  | -19.81 | -21.54 | -1.73 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Pleuronectes platessa* (Plaice) | flesh  | Denmark  | -18.85 | -20.07 | -1.22 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Phoca largha* (Spotted seal) | blubber  | Denmark  | -20.00 | -19.95 | 0.05 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Phoca largha* (Spotted seal) | blubber  | Denmark  | -12.80 | -14.26 | -1.46 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Phoca vitulina* (Harbour seal) | blubber  | Germany  | -18.56 | -20.21 | -1.65 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Gadus morhua* (Atlantic cod) | soft tissue  | Germany  | -21.30 | -21.70 | -0.40 | Taché & Craig 2015, Table S2 |
| Marine Organism | *Clupea harengus* (Atlantic herring) | soft tissue  | Germany  | -23.20 | -20.8 | 2.40 | Taché & Craig 2015, Table S2 |
| Marine Organism | Pinnipedia sp. (Seal) | bone  | Canada  | -22.98 | -24.15 | -1.17 | Taché & Craig 2015, Table S2 |
| Marine Organism | Pinnipedia sp. (Seal) | bone  | Canada  | -22.16 | -23.78 | -1.62 | Taché & Craig 2015, Table S2 |
| Marine Organism | Pinnipedia sp. (Seal) | bone  | Canada  | -24.59 | -24.28 | 0.31 | Taché & Craig 2015, Table S2 |
| Archaeological Sample-pottery | N/A | 15151 | Northwestern Alaska | -26.492 | -26.431 | 0.061 | Current study |
| Archaeological Sample-pottery | N/A | 14514c | Northwestern Alaska | -27.143 | -27.93 | -0.787 | Current study |
| Archaeological Sample-pottery | N/A | 14106c | Northwestern Alaska | -27.781 | -26.400 | 1.381 | Current study |
| Archaeological Sample-pottery | N/A | 14515b | Northwestern Alaska | -27.797 | -27.518 | 0.279 | Current study |
| Archaeological Sample-pottery | N/A | 14110a | Northwestern Alaska | -28.249 | -27.276 | 0.973 | Current study |
| Archaeological Sample-pottery | N/A | 14142a | Northwestern Alaska | -29.112 | -27.924 | 1.188 | Current study |
| Archaeological Sample-pottery | N/A | 13884e | Northwestern Alaska | -29.571 | -28.673 | 0.898 | Current study |
| Archaeological Sample-pottery | N/A | 14141f | Northwestern Alaska | -29.596 | -28.005 | 1.591 | Current study |
| Archaeological Sample-pottery | N/A | 14112 | Northwestern Alaska | -29.656 | -28.746 | 0.910 | Current study |
| Archaeological Sample-pottery | N/A | 13877b | Northwestern Alaska | -29.662 | -28.148 | 1.514 | Current study |
| Archaeological Sample-pottery | N/A | 15110 | Northwestern Alaska | -29.831 | -28.784 | 1.047 | Current study |
| Archaeological Sample-pottery | N/A | 14026g | Northwestern Alaska | -29.896 | -29.076 | 0.820 | Current study |
| Archaeological Sample-pottery | N/A | 14107c | Northwestern Alaska | -30.058 | -28.856 | 1.202 | Current study |
| Archaeological Sample-pottery | N/A | 15146 | Northwestern Alaska | -30.786 | -29.433 | 1.353 | Current study |
| Archaeological Sample-pottery | N/A | 14143c | Northwestern Alaska | -30.915 | -29.255 | 1.660 | Current study |
| Archaeological Sample-pottery | N/A | 13418 | Northwestern Alaska | -31.089 | -28.88 | 2.209 | Current study |
| Archaeological Sample-pottery | N/A | 14861b | Northwestern Alaska | -31.365 | -28.881 | 2.484 | Current study |
| Archaeological Sample-pottery | N/A | 14109a | Northwestern Alaska | -32.363 | -30.172 | 2.191 | Current study |
| Archaeological Sample-pottery | N/A | 14113g | Northwestern Alaska | -32.499 | -29.568 | 2.931 | Current study |
| Archaeological Sample-pottery | N/A | 14140a | Northwestern Alaska | -32.694 | -30.091 | 2.603 | Current study |