Results of weight % of C and N, C/Nat, and radiocarbon measurements of red deer and wapiti bone samples from Europe and Western Asia; Treatment methods: B=with ultrafiltration (this study), C=without ultrafiltration (Doan et al. 2017, 2022; Niedziałkowska et al. 2021; in italics).

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Lab code** | **Sample name** | **Treat. meth.** | **Taxonomic identity** | **Type of material** | **Latitude** | **Longitude** | **Study locality/site** | **Date of graphitization** | **%C** | **%N** | **C/Nat** | **Age 14C, BP ± 1σ** |
| GdA-4223 | Ur1295 | B | *C. canadensis* | bone | 55.11 | 58.38 | Sikiyaz-Tamak 22 cave, Ural/ cave | *Feb 2021* | 26.56 | 8.83 | 3.5 | 48000 ± 3000 |
|  |  | *C* |  |  |  |  |  | *Sep 2015* | *18.88* | *5.49* | *4.0* | *39390 ± 520* |
| GdA-4225 | Ur1 | B | *C. canadensis* | bone | 60.42 | 60.22 | Shajtanskaya cave, Ural/ cave | Mar 2021 | 22.87 | 8.05 | 3.3 | 3095 ± 30 |
|  |  | *C* |  |  |  |  |  | *Oct 2015* | *18.45* | *6.37* | *3.4* | *2990 ± 30* |
| GdA-4227 | Ur4 | B | *C. canadensis* | tooth | 59.26 | 57.41 | Machnevskaya Ledyanaya cave, Ural/ cave | Feb 2021 | 8.68 | 4.00 | 2.5 | 36300± 1000 |
|  |  | *C* |  |  |  |  |  | *Oct 2015* | *6.34* | *2.13* | *3.5* | *42400 ± 680* |
| GdA-4396 | I14 | B | *C. elaphus* | metatarsus | 40.563889 | 8.345556 | Pozzo sacro La Purissima, Sardinia/ well-sanctuary | Feb 2021 | 13.47 | 5.00 | 3.1 | 1695 ± 30 |
|  |  | *C* |  |  |  |  |  | *Dec 2015* | *7.60* | *1.92* | *4.6* | *1700 ± 30* |
| GdA-4593 | JS9 | B | *C. canadensis* | metatarsus | 57.699745 | 71.202736 | Ust-Ishim, region Omsk, Siberia/ river sediment | Feb 2021 | 17.60 | 5.90 | 3.5 | 41500 ± 1300 |
|  |  | *C* |  |  |  |  |  | *Apr 2016* | *15.18* | *4.10* | *4.3* | *39140 ± 270* |
| GdA-4601 | H12 | B | *C. elaphus* | mandibula | 47.6 | 14.02 | Gamsofen, Traweng, Ostwand-Tauplitzalm, Steiermark/ cave | Feb 2021 | 18.88 | 6.29 | 3.5 | 4940 ± 40 |
|  |  | *C* |  |  |  |  |  | *May 2016* | *16.75* | *4.16* | *4.7* | *4925 ± 30* |
| GdA-4609 | AR22 | B | *C. elaphus* | antler | 45.40833 | 40.42869 | Tsamakaberd (Sevan), Armenia | Feb 2021 | 23.10 | 7.49 | 3.6 | 215± 30 |
|  |  | *C* |  |  |  |  |  | *May 2016* | *8.30* | *2.80* | *3.5* | *200 ± 25* |
| GdA-4611 | AR69 | B | *C. elaphus* | cranium | 40.1098724 | 44.2452852 | Mokhrablur, Armenia/ municipal site | Feb 2021 | 15.05 | 5.51 | 3.2 | 2050 ± 30 |
|  |  | *C* |  |  |  |  |  | *Apr 2016* | *13.77* | *3.59* | *4.5* | *1980 ± 25* |
| GdA-4617 | J466 | B | *C. elaphus* | phalanx | 44.801281 | 34.289436 | Emine-Bair-Khosar, Crimea/ cave | Mar 2021 | 13.38 | 4.72 | 3.3 | 38500 ± 1100 |
|  |  | *C* |  |  |  |  |  | *Apr 2016* | *9.95* | *2.53* | *4.6* | *32430 ± 150* |
| GdA-4620 | AR70 | B | *C. elaphus* | cranium | 40.55666424445202 | 44.9836170030958 | Tsamakaberd (Sevan), Armenia/ lake sediment | Feb 2021 | 14.15 | 4.80 | 3.4 | 5580 ± 40 |
|  |  | *C* |  |  |  |  |  | *Apr 2016* | *8.50* | *2.08* | *4.8* | *5650 ± 30* |
| GdA-5882 | I62 | B | *C. elaphus* | phalanx | 41.95954808599722 | 12.764563134304844 | Grotta Polesini Bagni di Tivoli, Italy/ cave | Feb 2021 | 13.06 | 4.13 | 3.7 | 13390 ± 80 |
|  |  | *C* |  |  |  |  |  | *May 2019* | *4.54* | *1.05* | *5.1* | *13040 ± 45* |
| GdA-5883 | I63 | B | *C. elaphus* | phalanx | 41.95856673816734 | 13.544855635502234 | Grotta Continenza, Italy/ cave | Feb 2021 | 16.87 | 6.16 | 3.2 | 13210 ± 80 |
|  |  | *C* |  |  |  |  |  | *May 2019* | *12.39* | *3.12* | *4.7* | *8515 ± 35* |
| GdA-5886 | I2 | B | *C. elaphus* | phalanx | 39.18436 | 8.48583 | Monte Sirai, Sulcis, Sardinia/ municipal site | Feb 2021 | 42.80 | 14.60 | 3.4 | 2685 ± 30 |
|  |  | *C* |  |  |  |  |  | *Jun 2019* | *5.58* | *1.37* | *4.8* | *2480 ± 30* |
| GdA-5896 | BY42 | B | *C. elaphus* | metatarsus | 53.660672 | 23.823166 | Grodnaja district, Belarus/ no data | Feb 2021 | 44.35 | 15.57 | 3.3 | 5240 ± 35 |
|  |  | *C* |  |  |  |  |  | *Jun 2019* | *22.53* | *6.06* | *4.3* | *5135 ± 25* |