

European sites with cervid remains shown in Figures 3-5

The Pliocene and the Early Pleistocene (Fig. 3)

1. **Montpelier, Saint-Martin-de-Pruney, France** (MN 14); Early Pliocene, Ruscinian: *Cervavitus cauveri*, *Paracervulus australis*, *Paracervulus christoli*.
2. **Kuchurgan, Ukraine** and various other sites in Ukraine (MN 14-15); Early Pliocene, Ruscinian: *Muntiacus pliocaenicus*, *Eostyloceros pidoplitschkoi*, *Pliocervus kutschurganicus*, *Procapreolus (cusanus) moldavicus*.
3. **Fadagâl, Moldova** (MN 15); Early Pliocene, Ruscinian: *Procapreolus moldavicus*.
4. **Malușteni, Moldova** (MN 15); Early Pliocene, Ruscinian: *Procapreolus moldavicus*.
5. **Musselievo, Bulgaria** (MN 15); Early Pliocene; Ruscinian: *Cervus* cf. *pardinensis*, cf. *Procapreolus* sp.
6. **Perpignan, Briqueterie de la Route de`Espagne, France** (MN 15); Early Pliocene, Ruscinian: *Paracervulus perpinianensis*, “*Cervus*” *pyrenaicus*, “*Cervus*” *rusciniensis*.
7. **Roussillon, France** (MN 15); Early Pliocene, Ruscinian: *Paracervulus perpinianensis*, “*Cervus*” *pyrenaicus*, “*Cervus*” *rusciniensis*.
8. **Triversa, Italy** (MN 16a); Late Pliocene, Early Villafranchian, Triversa F. U., 3.2 Mya: *Pseudodama lyra* (*Cervus nestii*).
9. **Vilaette, France** (MN 16a); Late Pliocene, Early Villafranchian: *Croizetoceros ramosus ramosus*, *Metacervoceros pardinensis*, “*Cervus*” (*Praeclaphus*) *perrieri*, *Arvernocervus ardei*, *Procapreolus cusanus*.
10. **Villaroya, Spain** (MN 16a); Late Pliocene, Early Villafranchian, 2.9-3.0 Mya: *Croizetoceros ramosus minus*, “*Cervus*” (*Praeclaphus*) *perrieri*, *Arvernoceros ardei*.
11. **Montopoli, Italy** (MIS 99-104; MN 16b/MN 17); Late Pliocene/Early Pleistocene, Middle Villafranchian, 2.5-2.6 Mya: *Eostyloceros* cf. *pidoplitschkoi*, *Croizetoceros ramosus*, *Eucladoceros tegulensis*, *Pseudodama* cf. *lyra*, *Procapreolus cusanus*.
12. **Montopoli, Italy** (MIS 102-103; MN 17); Early Pleistocene, Middle Villafranchian, 2.5-2.6 Mya: *Eostyloceros* cf. *pidoplitschkoi*, *Croizetoceros ramosus*, *Eucladoceros ctenoides*, *Pseudodama* (*Axis*) *lyra*.
13. **Khapry, Russia** (MIS 100-103; MN 17); Early Pleistocene, Middle Villafranchian, 2.5-2.6 Mya: *Eucladoceros dicranios tanaitensis*, *Metacervoceros philisi*, *Arvernoceros* sp.
14. **Les Étouaires, France** (MIS 97-101; MN 17); Early Pleistocene, Middle Villafranchian, 2.4-2.5 Mya: *Procapreolus cusanus*, *Croizetoceros ramosus ramosus*, *Metacervoceros pardinensis*, “*Cervus*” (*Praeclaphus*) *perrieri*, *Arvernocervus ardei*.
15. **Chagny, France** (MIS 94-99; MN 17); Early Pleistocene, Middle Villafranchian, 2.4-2.5 Mya: “*Cervus*” (*Praeclaphus*) *perrieri*.
16. **Roccaneyra, France** (MIS 94-99; MN 17); Early Pleistocene, Middle Villafranchian, 2.4-2.5 Mya: *Eucladoceros ctenoides vireti*.
17. **Pardines, France** (MIS 89-94; MN 17); Early Pleistocene, Middle Villafranchian, 2.3-2.4 Mya: *Croizetoceros ramosus medius*, *Eucladoceros ctenoides vireti*, *Metacervoceros rhenanus valliensis*.
18. **Varshets, Bulgaria** (MIS 89-94; MN 17); Early Pleistocene, Middle Villafranchian, 2.3-2.4 Mya: *Eucladoceros tegulensis*, *Dama nestii*.
19. **Slobozia Mare, Moldova** (MN 17); Early Pleistocene, Middle Villafranchian: *Dama* sp., *Arvernoceros ardei*.
20. **Saint-Vallier, France** (MIS 80-89; MN 17), Early Pleistocene, Middle Villafranchian; 2.1-2.3 Mya: *Croizetoceros ramosus medius*, *Eucladoceros ctenoides vireti*, *Metacervoceros rhenanus valliensis*.

21. **Bakinskaya, Psekups, Russia** (MIS 80-84; MN 17); Early Pleistocene, Middle Villafranchian, 2.1-2.2 Mya: *Eucladoceros orientalis orientalis*, *Dama nestii*.
22. **Georgievsk, Russia** (MIS 80-84; MN 17); Early Pleistocene, Middle Villafranchian, 2.1-2.2 Mya: *Eucladoceros orientalis orientalis*, *Dama nestii*.
23. **Dafnero, Greece** (MIS 79-84; MN 17); Early Pleistocene, Middle Villafranchian, 2.1-2.2 Mya: *Eucladoceros ctenoides*, *Metacervoceros rhenanus*.
24. **Sesklo, Greece** (MIS 79-84; MN 17); Early Pleistocene, Middle Villafranchian, 2.1-2.2 Mya: *Croizetoceros ramosus*, *Eucladoceros ctenoides*, *Metacervoceros rhenanus*.
25. **Volakas, Greece** (MIS 79-84; MN 17); Early Pleistocene, Middle Villafranchian, 2.1-2.2 Mya: *Croizetoceros ramosus*, *Eucladoceros ctenoides*, *Metacervoceros rhenanus*.
26. **La Roche Lambert, France** (MIS 83; MN 17); Early Pleistocene, Middle Villafranchian, 2.2 Mya: *Croizetoceros ramosus medius*, *Eucladoceros ctenoides vireti*.
27. **Tegelen, The Netherlands** (MIS 79-80; MN 17); Early Pleistocene, Middle/Late Villafranchian, 2.1 Mya: *Eucladoceros tegulensis*, *Metacervoceros rhenanus*.
28. **Cornillet, France** (MIS 76-80; MN 17); Early Pleistocene, Late Villafranchian, 2.0-2.1 Mya: *Croizetoceros ramosus*, *Eucladoceros ctenoides*, *Metacervoceros rhenanus*.
29. **La Puebla de Valverde, Spain** (MIS 76-80; MN 17); Early Pleistocene, Late Villafranchian, 1.95-2.14 Mya: *Croizetoceros ramosus minus*, *Eucladoceros ctenoides senezensis*, *Metacervoceros rhenanus valliensis*.
30. **Fonelas P-1, Spain** (MIS 76-78; MN 17); Early Pleistocene, Late Villafranchian, 2.0 Mya: *Croizetoceros ramosus fonelensis*, *Metacervoceros rhenanus perolensis*, *Eucladoceros* sp.
31. **Vatera, Greece** (MIS 76-77; MN 17); Early Pleistocene, Late Villafranchian, 2.0 Mya: *Croizetoceros ramosus*, *Metacervoceros rhenanus*.
32. **Chilhac, France** (MIS 71-76; MN 17); Early Pleistocene, Late Villafranchian, 1.9-2.0 Mya: *Croizetoceros ramosus minus*, *Eucladoceros ctenoides senezensis (vireti)*, *Metacervoceros rhenanus valliensis*, *Alces* cf. *carnutorum*.
33. **De Blassac-La-Gironde, France** (MIS 71-76; MN 17), Early Pleistocene, Late Villafranchian, 1.9-2.0 Mya: *Eucladoceros ctenoides senezensis (vireti)*, *Metacervoceros rhenanus valliensis*.
34. **Le Coupet, France** (MIS 71-76; MN 17); Early Pleistocene, Late Villafranchian, 1.9-2.0 Mya: *Croizetoceros ramosus minus*, *Eucladoceros ctenoides senezensis (vireti)*, *Metacervoceros rhenanus valliensis*, *Alces* cf. *carnutorum*.
35. **Olivola, Italy** (MIS 71-76; MN 17); Early Pleistocene, Late Villafranchian, 1.9-2.0 Mya: *Eucladoceros dicranios olivolanus*, *Pseudodama (Cervus) nestii*.
36. **Oosterschelde, The Netherlands** (MIS 71; MN 17); Early Pleistocene, Late Villafranchian, 1.9 Mya: *Metacervoceros rhenanus*, *Eucladoceros ctenoides*.
37. **Montoussé 5, France** (MIS 63-71; MN 17/18); Early Pleistocene, Late Villafranchian, 1.8-1.9 Mya: *Metacervoceros rhenanus philisi*, *Cervalces gallicus*.
38. **Senèze, France** (MIS 63-71; MN 17/18); Early Pleistocene, Late Villafranchian, 1.8-1.9 Mya: *Croizetoceros ramosus minus*, *Metacervoceros rhenanus philisi*, *Eucladoceros ctenoides senezensis*, *Cervalces gallicus*.
39. **Gerakarou, Greece** (MIS 63-71; MN 17/18); Early Pleistocene, Late Villafranchian, 1.8-1.9 Mya: *Croizetoceros ramosus gerakarensis*, *Eucladoceros ctenoides*, *Metacervoceros rhenanus*.
40. **East Runton, Britain** (MIS 61-63); Early Pleistocene, Late Villafranchian, 1.8 Mya: *Cervus elaphus*, *Praemegaceros verticornis*, *Megaloceros dawkinsi*, *Eucladoceros tetraceros*, *Eucladoceros ctenoides/tegulensis*, *Metacervoceros rhenanus*, *Cervalces gallicus*.
41. **Dmanisi, Georgia** (MIS 61); Early Pleistocene, Late Villafranchian, 1.77 Mya: *Cervus abesalomi*, *Eucladoceros* cf. *tegulensis*.
42. **Figline, Upper Valdarno, Italy** (MIS 59-61); Early Pleistocene, Late Villafranchian, 1.7-1.8 Mya: *Eucladoceros* cf. *giulli*, *Pseudodama (Cervus) nestii*, *Dama eurygonos*.

43. **Il Tasso, Upper Valdarno, Italy** (MIS 59-61); Early Pleistocene, Late Villafranchian, 1.7-1.8 Mya: *Eucladoceros* cf. *giulli* (*dicranios/ctenoides*), *Pseudodama* (*Cervus*) *nestii*, *Dama eurygonos*.
44. **Krimni, Greece** (MIS 60; ?MNQ 19), 1.7 Mya: *Eucladoceros ctenoides*.
45. **Monte Riccio, Italy** (?MIS 58-60); Early Pleistocene, Late Villafranchian: *Eucladoceros ctenoides*, *Praeclaphus lyra*.
46. **Casa Frata, Upper Valdarno, Italy** (MIS 55-59); Early Pleistocene, Late Villafranchian, 1.6-1.7 Mya: *Eucladoceros tegulensis* (*dicranios*), *Dama nestii nestii*.
47. **Selvella, Italy** (MIS 50-52); Early Pleistocene, Late Villafranchian, 1.4-1.5 Mya: *Eucladoceros tegulensis*, *Dama nestii nestii* (*Dama eurygonos farnetensis*), *Megaceroides obscurus*.
48. **Farneta, Italy** (MIS 45-50); Early Pleistocene, Late Villafranchian, 1.4-1.5 Mya: *Praemegacerides verticornis*, *Pseudodama farnetensis*, (*Dama eurygonos farnetensis*).
49. **Peyrolles, France** (MIS 45-50), Early Pleistocene, Late Villafranchian, 1.4-1.5 Mya: *Eucladoceros* sp. (*tetraceros*), *Metacervoceros rhenanus perolensis*.
50. **Pietrafitta, Italy** (MIS 45-50); Early Pleistocene, Late Villafranchian, 1.4-1.5 Mya: *Megaceroides obscurus* (*Praemegaceros verticornis*), *Pseudodama farnetensis* (*Dama eurygonos farnetensis*).
51. **Val di Chiana, Italy** (MIS 45-50); Early Pleistocene, Late Villafranchian, 1.4-1.5 Mya: *Praemegacerides verticornis*, *Pseudodama farnetensis* (*Dama eurygonos farnetensis*).
52. **Di Capena, Italy** (MIS 45); Early Pleistocene, Late Villafranchian, 1.4-1.5 Mya: *Dama nestii eurygonos* (*Dama vallonetensis*), *Megaceroides solilhacus*, *Capreolus* sp.
53. **Barranco León-5; Fuente Nueva-3, Spain** (MIS 30-43); Early Pleistocene, Late Villafranchian: *Metacervoceros rhenanus*, *Praemegaceros verticornis*.
54. **Ceyssaguet, France** (MIS 36-37); Early Pleistocene, Late Villafranchian, 1.2-1.3 Mya: *Eucladoceros ctenoides*, *Metacervoceros rhenanus*, *Praemegaceros obscurus*.
55. **Pirro Nord, Italy** (MIS 36-37); Early Pleistocene, Late Villafranchian, 1.2-1.3 Mya: *Dama* (*Axis*) *nestii eurygonos* (*Dama* cf. *vallenetensis*, *Pseudodama farnetensis*), *Dama vallonetensis*, *Megaceroides solilhacus* (*Megaceroides obscurus*), *Capreolus* sp.
56. **Venta Micena, Spain** (MIS 36); Early Pleistocene, Late Villafranchian, 1.2-1.3 Mya: *Eucladoceros* (*Arvernoceros*) *giulli*, *Dama nestii vallonetensis*.
57. **Saint-Prest, France** (MIS 20-35); Early Pleistocene, Late Villafranchian/Galerian, 0.8-1.2 (1.0) Mya: *Cervidae* sp. 1 cf. *elaphus*, *Dama* sp., *Praemegaceros verticornis*, *Cervalces carnutorum*.
58. **Castagnone, Italy** (MIS 25-31); Early Pleistocene, Galerian, 0.99-1.07 Mya: *Dama* s.l. *nestii vallonetensis*, *Capreolus* sp.
59. **Le Vallonnet Cave, France** (MIS 29); Early Pleistocene, Galerian, 0.9-1.3 Mya: *Metacervoceros rhenanus*, *Dama nestii vallonetensis*, *Praemegaceros* sp.
60. **Untermassfeld, Germany** (MIS 29); Early Pleistocene, Jaramillo Subchron, Galerian, 0.9-1.07 Mya: *Eucladoceros giulli*, *Dama vallonetensis*, *Capreolus cusanoideis*, *Alces carnutorum*.
61. **Semibaliki, Tsimbal, Taman, Russia** (MIS 27-29); Early Pleistocene, Galerian: *Eucladoceros orientalis pliotarandoides*.
62. **Deutsch-Altenburg 4B, Austria** (MIS 28); Early Pleistocene, Galerian, 1.0-1.1 Mya: *Eucladoceros* sp., *Dama nestii*, "*Cervus*" *cusanus* (= *Capreolus cusanoideis*).
63. **Dorn-Dürkheim 3, Germany** (MIS 21); Early/Middle Pleistocene, Galerian, Cromerian I, 0.8 Mya: *Cervus acoronatus*, *Praemegaceros verticornis*, *Cervalces latifrons*, *Capreolus suessenbornensis*.
64. **Atapuerca TD4-6, Spain** (MIS 20-21); Early/Middle Pleistocene, Galerian, Glacial A-Cromerian I, 0.8 Mya: *Cervus elaphus acoronatus*, *Eucladoceros giulli*, *Dama nestii* ?*vallonetensis*, *Megaloceros*/*Eucladoceros*, *Capreolus* sp.
65. **Würzburg-Schalksberg, Germany** (MIS 20); Early/Middle Pleistocene, Galerian, Early Cromerian, Glacial A, 0.9 Mya? *Eucladoceros* sp., *Cervus* sp., ?*Praemegaceros* sp., *Cervalces gallicus*, *Capreolus suessenbornensis*.

The Middle Pleistocene (Fig. 4)

1. **Tologoy, Russia** (MIS 15-20); Early/Middle Pleistocene: *Cervus elaphus*, *Megaloceros* sp.
2. **Atapuerca TD8, Spain** (MIS 19); Early Middle Pleistocene, Cromerian II, 0.7-0.8 Mya: *Cervus elaphus acoronatus*, *Dama nestii* ?*vallonetensis*, *Eucladoceros giulli*.
3. **Ponte Galeria, Italy** (MIS 18); Middle Pleistocene, Middle Cromerian, Glacial B: *Cervus elaphus acoronatus*, *Pseudodama* sp., *Praemegaceros verticornis*, *Megaloceros savini*.
4. **Muratella di Mezzo, Italy** (MIS 17-18); Middle Pleistocene: *Praemegaceros verticornis*, *Megaloceros savini*.
5. **Kessingland, Britain** (MIS 17); Middle Pleistocene, Middle Cromerian, 0.7 Mya: *Cervus elaphus acoronatus*, *Dama roberti*, *Megaloceros sawini*, *Praemegaceros verticornis*, *Praemegaceros dawkinsi*, *Capreolus capreolus suessenbornensis*.
6. **Pakefield, Britain** (MIS 17); Middle Pleistocene, Middle Cromerian, 0.7 Mya: *Cervus elaphus acoronatus*, *Dama roberti*, *Praemegaceros verticornis*, *Megaloceros sawini*, *Megaloceros dawkinsi*, *Cervalces latifrons*, *Rangifer tarandus*.
7. **Voigstedt, Germany** (MIS 17); Middle Pleistocene, Middle Cromerian, Cromerian III, 0.6-0.7 Mya: *Cervus elaphus*, *Praemegaceros verticornis*, *Cervalces latifrons*, *Capreolus suessenbornensis*.
8. **West Runton, Britain** (MIS 17); Middle Pleistocene, Middle Cromerian, 0.7 Mya: *Cervus elaphus acoronatus*, *Dama roberti*, *Megaloceros sawinii*, *Praemegaceros verticornis*, *Capreolus capreolus suessenbornensis*, *Alces latifrons*.
9. **Stránská Skála, Czech Republic** (MIS 17-16); Middle Pleistocene, Middle Cromerian, Cromerian III – Glacial C, 0.7-0.6 Mya: *Cervus acoronatus*, *Praemegaceros* cf. *verticornis*, *Cervalces latifrons*, *Capreolus suessenbornensis*.
10. **Isernia La Pineta, Italy** (MIS 14-17); Middle Pleistocene, Middle Cromerian, 0.55-0.7 Mya: *Cervus elaphus acoronatus*, *Dama dama clactoniana*, *Megaceroides solilhacus*, *Capreolus* sp.
11. **Kärlich F, Germany** (MIS 16); Middle Pleistocene, Middle Cromerian, Glacial C: *Cervus elaphus*, *Praemegaceros verticornis*.
12. **Süssenborn, Germany** (MIS 16); Middle Pleistocene, Middle Cromerian, Glacial C: *Cervus elaphus*, *Praemegaceroides verticornis*, *Megaloceros savini*, *Cervalces latifrons*, *Capreolus suessenbornensis*, *Rangifer tarandus stadelmani*.
13. **Tiraspol, Moldova** (MIS 16); Middle Pleistocene, Glacial C, Middle Cromerian: *Cervus elaphus*, *Praemegaceros verticornis*, *Praedama suessenbornensis* (*Megaloceros savinii*), *Cervalces latifrons*, *Capreolus suessenbronensis*, *Rangifer tarandus*.
14. **Soleilhac, France** (MIS 15); Middle Pleistocene, Middle Cromerian, Cromerian IV: *Cervus elaphus*, *Praemegaceros soleilhacus*, *Dama roberti*, *Capreolus suessenbornensis*.
15. **Cromer, Britain** (MIS 14-15); Middle Pleistocene, Late Cromerian, Cromerian IV: *Praemegaceros verticornis*, *Megaloceros dawkinsi*, *Cervalces latifrons*, ?*Capreolus suessenbornensis*.
16. **Mauer, Germany** (MIS 13-15), Middle Pleistocene, Cromerian IV, Middle Cromerian, 0.6 Mya: *Cervus elaphus acoronatus*, *Alces latifrons*, *Capreolus priscus*.
17. **Mosbach 2, Germany** (MIS 13-15); Middle Pleistocene, Cromerian IV, Middle Cromerian, 0.5-0.6 Mya: *Cervus elaphus acoronatus*, *Dama dama clactoniana*, *Megaloceros soleilhacus*, *Praemegaceros verticornis*, *Capreolus suessenbornensis*, *Cervalces latifrons*, *Rangifer tarandus stadelmanni*.
18. **Treugolnaya Cave, Russia** (MIS 14); Middle Pleistocene, Middle Cromerian, Cromerian IV: *Cervus elaphus acoronatus*, *Dama* sp., *Praemegaceros* sp., *Capreolus* cf. *suessenbornensis*.
19. **Kärlich Gb-H, Germany** (MIS 13-14); Middle Pleistocene, Cromerian IV, Middle Cromerian: *Cervus acoronatus*, *Praemegaceros verticornis*, cf. *Dama* sp., *Cervalces* sp.
20. **Caune de l'Arago, France** CMI – CMIII (MIS 12-14); Middle Pleistocene, Late Cromerian, 0.4-0.5 Mya: *Cervus elaphus*, *Dama dama clactoniana*, *Rangifer tarandus*.

21. **Petralona, Greece** (MIS 12-14); Middle Pleistocene, Late Cromerian, Elsterian Glacial – Cromerian IV Interglacial, 0.4-0.5 Mya: *Cervus elaphus*, *Dama dama clactoniana*, *Praemegaceros verticornis*.
22. **Boxgrove, Britain** (MIS 13); Middle Pleistocene, Late Cromerian, Cromerian IV: *Cervus elaphus*, *Praemegaceros dawkinsi*, *Capreolus capreolus*.
23. **Hundsheim, Austria** (MIS 13); Middle Pleistocene, Cromerian IV: *Cervus elaphus angulatus*, *Dama clactoniana*, *Capreolus capreolus priscus*.
24. **Miesenheim 2, Germany** (MIS 13); Middle Pleistocene, Cromerian IV, Cromerian: *Cervus acoronatus*, *Capreolus suessenbornensis*.
25. **Mundesley, Britain** (MIS 13); Middle Pleistocene, Late Cromerian, Cromerian IV, 0.5 Mya: *Cervus elaphus acoronatus*, *Praemegaceros verticornis*, *Megaloceros dawkinsi*, *Megaloceros savini*, *Cervalces latifrons*.
26. **Soave, Italy** (MIS 13); Middle Pleistocene, Cromerian, Cromerian IV: *Cervus elaphus acroanatus*.
27. **Vértesszőlös, Hungary** (MIS 13); Middle Pleistocene, Late Cromerian, Cromerian IV: *Cervus acoronatus*, *Capreolus suessenbornensis*.
28. **Westbury-Sub-Mendip Cave, Britain** (MIS 13); Middle Pleistocene, Late Cromerian, Cromerian IV, 0.5 Mya: *Cervus elaphus acoronatus*, *Dama* sp., *Cervalces latifrons*, *Rangifer tarandus*.
29. **Domegliara, Italy** (?MIS 13); Middle Pleistocene, Cromerian, Cromerian IV: *Cervus elaphus acroanatus*.
30. **Romagnano, Italy** (?MIS 13); Middle Pleistocene, Cromerian, Cromerian IV: *Cervus elaphus acoronatus*.
31. **Bilshausen, Germany** (MIS 11 or MIS 13); Middle Pleistocene, Cromerian IV or Holsteinian Interglacial: *Praemegaceros verticornis*, *Cervalces latifrons*.
32. **Bilzingsleben, Germany** (MIS 11); Middle Pleistocene, Holsteinian, 0.4 Mya: *Cervus elaphus*, *Dama dama clactoniana*, *Capreolus* cf. *suessenbornensis*.
33. **Clacton, Britain** (MIS 11); Middle Pleistocene, Late Cromerian, Cromerian IV, 0.4 Mya: *Dama clactoniana*.
34. **Hoxne, Britain** (MIS 11); Middle Pleistocene, Late Cromerian, Cromerian IV, 0.4 Mya: *Cervus elaphus*, *Dama clactoniana*, *Megaloceros giganteus*, *Capreolus capreolus*.
35. **Jaywick, Britain** (MIS 11); Middle Pleistocene, Late Cromerian, Cromerian IV, 0.4 Mya: *Dama clactoniana*.
36. **Vergranne, France** (MIS 11); Middle Pleistocene, Holstein Interglacial: *Cervus elaphus*, *Cervalces latifrons*, *Capreolus* cf. *suessenbornensis*.
37. **Ördöglyuk Cave, Hungary** (MIS 9 or MIS 11); Middle Pleistocene, Dömnitz or Reinsdorf Interglacial - Cromerian IV: *Cervus elaphus* ssp., *Alces brevirostris*.
38. **Ariendorf 1, Germany** (MIS 8 or MIS 11); Middle Pleistocene, Saalian Glacial or Holsteinian Interglacial: *Cervus elaphus*.
39. **Atapuerca TG, TD10, Spain** (MIS 9-11); Middle Pleistocene, Dömnitz – Reinsdorf Interglacial-Holsteinian Interglacial, 0.3-0.4 Mya: *Cervus elaphus priscus*, *Dama dama clactoniana*, ?*Praemegaceros dawkinsi*.
40. **Orgnac 3, France** (MIS 9-11); Middle Pleistocene, Dömnitz-Reinsdorf Interglacial – Holsteinian Interglacial, 0.3-0.4 Mya: *Cervus elaphus*, *Dama dama clactoniana*, *Megaceros* sp., *Capreolus capreolus suessenbornensis*, *Rangifer tarandus*.
41. **Swanscombe, Britain** (MIS 9-11); Middle Pleistocene, Dömnitz – Reinsdorf Interglacial - Cromerian IV, 0.3-0.4 Mya: *Cervus elaphus*, *Dama roberti*, *Megaloceros giganteus*, *Capreolus capreolus suessenbornensis*, *Alces* sp.
42. **Szuhogy-Csorbakö, Hungary** (MIS 9-11); Middle Pleistocene, Dömnitz – Reinsdorf Interglacial - Cromerian IV: *Megaloceros giganteus germanicus*, *Rangifer tarandus*.

43. **Riano, Italy** (MIS 10); Middle Pleistocene, Fuhne Glacial: *Cervus elaphus rianensis*, *Dama clactoniana*.
44. **Châtillon-S-Jean, France** (MIS 8-10); Middle Pleistocene, Fuhne Glacial – Saalian Glacial: *Cervus elaphus*, *Megaloceros* cf. *giganteus*, *Rangifer tarandus*.
45. **Heppenloch, Germany** (MIS 9); Middle Pleistocene, Dömnitz – Reinsdorf Interglacial: *Cervus elaphus*, *Dama* sp., *Megaloceros* sp., *Capreolus priscus*.
46. **Schöningen 13II, Germany** (MIS 9); Middle Pleistocene, Holsteinian: *Cervus elaphus*, *Megaloceros giganteus*, *Capreolus capreolus*, Cervidae gen. et sp. indet.
47. **Steinheim, Germany** (MIS 8-9, MIS 6-11); Middle Pleistocene: *Cervus elaphus*, *Megaloceros giganteus* ssp., *Cervus elaphus angulatus*, *Megaloceros giganteus antecendens*, *Capreolus capreolus priscus*.
48. **Tourville, France** (MIS 7-9); Middle Pleistocene, Röpersdorf-Schöningen Interglacial -Dömnitz-Reinsdorf Interglacial: *Cervus elaphus*, *Megaloceros* sp., *Capreolus capreolus*, *Rangifer tarandus*.
49. **Ariendorf 2, Germany** (MIS 8); Middle Pleistocene, Saalian Glacial: *Cervus elaphus*.
50. **Abîmes De La Fage, France** (MIS 7); Middle Pleistocene, Röpersdorf-Schöningen Interglacial: *Cervus elaphus*, *Dama clactoniana*, *Megaloceros* cf. *giganteus*, *Capreolus capreolus*, *Rangifer tarandus*.
51. **Ariendorf 3, Germany** (MIS 7); Middle Pleistocene, Röpersdorf – Schöningen Interglacial: *Cervus elaphus*.
52. **Bucine, Italy** (MIS 7); Middle Pleistocene: *Cervus elaphus*, *Megaloceros* sp., *Dama dama*, *Capreolus capreolus*.
53. **Ehringsdorf, Germany** (MIS 7); Middle Pleistocene, Röpersdorf – Schöningen Interglacial: *Cervus elaphus*, *Dama* sp., *Megaloceros giganteus germanie*, *Alces latifrons postremus*, *Rangifer tarandus*.
54. **Neumark Nord, Germany** (MIS 7); Middle Pleistocene, Röpersdorf – Schöningen Interglacial; >0.2 Mya: *Cervus elaphus spelaeus*, *Dama dama geiselana*, *Megaloceros giganteus antecendens*.
55. **Repulosthöhle, Austria** (MIS 7); Middle Pleistocene, Röpersdorf – Schöningen Interglacial: *Cervus elaphus*, *Megaloceros giganteus*, *Alces* sp., *Capreolus capreolus*, *Rangifer tarandus*.
56. **Vaufrey, France** (MIS 6 or MIS 7); Middle Pleistocene, Röpersdorf-Schöningen Interglacial or Drenthe Glacial: *Cervus elaphus*.
57. **Acquedolci, Italy** (MIS 6-7); Middle Pleistocene, Röpersdorf – Schöningen Interglacial/Drenthe Glacial: *Cervus elaphus siciliae*.
58. **Burshtyn, Ukraine** (MIS 6-7); Middle Pleistocene; Röpersdorf-Schöningen Interglacial-Drenthe Glacial: *Cervus elaphus*, *Megaloceros giganteus*.
59. **Achenheim, France** (MIS 6); Middle Pleistocene, Saalian: *Cervus elaphus*, *Megaloceros giganteus*, *Cervalces latifrons*, *Rangifer tarandus*.
60. **Kärlich 1, Germany** (MIS 6); Middle Pleistocene, Drenthe Glacial: *Cervus elaphus*.
61. **Schweinskopf 4, Germany** (MIS 6); Middle Pleistocene, Drenthe Glacial: *Cervus elaphus*, *Megaloceros giganteus*, *Rangifer tarandus*.
62. **Wannen 1 and 2, Germany** (MIS 6); Middle Pleistocene, Drenthe Glacial: *Cervus elaphus*.
63. **Grotta di San Bernardino, Italy** (MIS 3-6); Late-Middle Pleistocene: *Cervus elaphus*, *Megaloceros* cf. *giganteus*, *Alces alces*, *Capreolus capreolus*.
64. **Biliaivka, Ukraine**; Middle Pleistocene: *Cervus elaphus*.

The Late Pleistocene and the Holocene (Fig. 5)

1. **Eich, Germany** (MIS 5e); Late/Middle Pleistocene: *Megaloceros giganteus*, *Cervalces latifrons*, *Rangifer tarandus*.
2. **Binagady, Azerbaijan** (MIS 5e); Late Pleistocene, Eemian: *Cervus elaphus*, *Megaloceros giganteus*.
3. **Chlupáč – Höhle, Czech Republic** (MIS 5e); Late Pleistocene, Eemian: *Cervus elaphus*, *Dama dama*, *Capreolus capreolus*, *Rangifer tarandus*.
4. **Črni Kal, Slovenia** (MIS 5e); Late Pleistocene, Eemian: *Cervus elaphus*, *Capreolus capreolus*.
5. **Hummerich 4, Germany** (MIS 5e); Late Pleistocene, Eemian: *Cervus elaphus*, *Dama dama*, *Capreolus capreolus*.
6. **Kálmán Lambrecht Cave, Hungary** (MIS 5e); Late Pleistocene, Eemian: *Cervus elaphus*, *Megaloceros giganteus*, *Alces alces*, *Capreolus capreolus*, *Rangifer tarandus*.
7. **Taubach, Germany** (MIS 5e); Late Pleistocene, Eemian: *Cervus elaphus*, *Megaloceros giganteus germaniae*, *Capreolus capreolus*, *Rangifer tarandus*.
8. **Tönchesberg 2, Germany** (MIS 5e); Late Pleistocene, Eemian: *Cervus elaphus*, cf. *Dama dama*.
9. **Weimar, Germany** (MIS 5e); Late Pleistocene, Eemian: *Cervus elaphus*, *Megaloceros giganteus germaniae*, *Dama dama*, *Capreolus capreolus*, *Rangifer tarandus*.
10. **Kudaro Cave, Georgia**, Mousterian (MIS 3-5e); Late Pleistocene, Eemian – Interplenivistulian: *Cervus elaphus*, *Megaloceros* sp., *Alces alces*, *Capreolus capreolus*.
11. **Matuzka Cave, Russia**, Mousterian (MIS 3-5e); Late Pleistocene, Eemian-Vistulian: *Cervus elaphus*, *Capreolus capreolus*.
12. **Shan-Koba; Kiik Koba** (MIS 3-5e); Late Pleistocene, Eemian – Interplenivistulian: *Cervus elaphus*, *Megaloceros giganteus*.
13. **Villereversure, France** (?MIS 3-5e); Late Pleistocene, Vistulian-Eemian: *Cervus elaphus*, *Megaloceros giganteus*, *Capreolus capreolus*, *Rangifer tarandus*.
14. **Parska Golobina, Slovenia** (MIS 2-5); Late Pleistocene: *Cervus elaphus*, *Dama dama*, *Megaloceros giganteus*.
15. **Emine-Bair-Khosar-Cave, Ukraine** (MIS 1-5e); Late Pleistocene, Older Plenivistulian-Holocene: *Cervus elaphus*, *Megaloceros giganteus*.
16. **Grotte de Enfants, Grimaldi, Italy** (MIS 1-5); Late Pleistocene, Vistulian: *Cervus elaphus*, *Alces alces*, *Capreolus capreolus*.
17. **Burgtona, Germany** (MIS 5c-d); Late Pleistocene, Early Vistulian: *Cervus elaphus*, *Dama dama*, *Capreolus capreolus*, *Rangifer tarandus*.
18. **Švédův Stůl, Czech Republic** (MIS 3-5d); Late Pleistocene, Vistulian: *Cervus elaphus maral*, *Alces alces*, *Rangifer tarandus*.
19. **Veternica Cave, Croatia** (MIS 3-5c); Late Pleistocene, Early Vistulian – Interplenivistulian: *Cervus elaphus*, *Alces alces*, *Capreolus capreolus*.
20. **Parignana, Italy** (MIS 3-4/5a); Late Pleistocene, Vistulian: *Cervus elaphus*, *Capreolus capreolus*.
21. **Pocala, Maspino, Italy** (MIS 4); Late Pleistocene: *Cervus elaphus*.
22. **Bacho Kiro, Bulgaria** (MIS 3-4); Late Pleistocene, Older Plenivistulian – Interplenivistulian: *Cervus elaphus*, *Megaloceros giganteus*, *Capreolus capreolus*.
23. **Ferrassie, France** (MIS 3-4); Late Pleistocene, Older Plenivistulian – Interplenivistulian: *Cervus elaphus*.
24. **Pair-non-Pair, Roc Traücat, France** (MIS 3-4); Late Pleistocene: *Megaloceros giganteus*.
25. **Duruitoarea Veche, Moldova** (MIS 2-4); Late Pleistocene: *Megaloceros giganteus*, *Rangifer tarandus*.
26. **Bukovynka Cave, Ukraine** (MIS 3); Late Pleistocene. Interplenivistulian: *Megaloceros giganteus*.

27. **Cantet, France** (MIS 3); Late Pleistocene, Interplenivistulian: *Cervus elaphus*, *Megaloceros giganteus*, *Capreolus capreolus*, *Rangifer tarandus*.
28. **Romankovo, Ukraine** (MIS 3); Late Pleistocene, Vistulian, Interplenivistulian: *Megaloceros giganteus*.
29. **Bohunice, Czech Republic** (?MIS 3); Late Pleistocene, Interplenivistulian: *Cervus elaphus*, *Capreolus capreolus*.
30. **Bucco dell'Orso, Italy** (?MIS 3); Late Pleistocene: *Cervus elaphus*, *Megaloceros giganteus*.
31. **Flemish Valley, Belgium** (?MIS 3); Late Pleistocene; Vistulian: *Cervus elaphus*, *Megaloceros giganteus*, *Capreolus capreolus*, *Rangifer tarandus*.
32. **Willendorf, Austria** (MIS 2-3); Late Pleistocene; Interplenivistulian/LGM: *Cervus elaphus*, *Rangifer tarandus*.
33. **Vogelherd, Germany** (MIS 1-3); Late Pleistocene, Interplenivistulian-Late Vistulian: *Cervus elaphus*, *Megaloceros giganteus*, *Rangifer tarandus*.
34. **Brînzei-1, Moldova** (MIS 2); Late Pleistocene, LGM: *Megaloceros giganteus*, *Rangifer tarandus*.
35. **Sakažhia, Gvardzhilas-Klde Cave, Georgia** (MIS 2); Late Pleistocene, LGM: *Cervus elaphus*, *Alces alces*, *Capreolus capreolus*.
36. **Wannen 4/5, Germany** (MIS 2); Late Pleistocene, LGM: *Cervus elaphus*; *Rangifer tarandus*.
37. **Grotta delle Settencannelle, Italy** (MIS 2/1); Late Pleistocene, Vistulian, Epigravettian (20,650 – 11,350 cal. BP.): *Cervus elaphus*.
38. **Andernach 2, Germany** (MIS 1); Late Pleistocene, Late Vistulian, Allerød: *Cervus elaphus*, *Alces alces*.
39. **Niederbieber, Germany** (MIS 1); Late Pleistocene, Late Vistulian, Allerød: *Cervus elaphus*, *Alces alces*.
40. **Starr Carr, Britain** (MIS 1); Late Pleistocene, Early Mesolithic: *Cervus elaphus*, *Alces alces*, *Capreolus capreolus*.
41. **Urbar, Germany** (MIS 1); Late Pleistocene, Late Vistulian, Allerød: *Cervus elaphus*.
42. **Ziegeunerfels, Germany** (MIS 1); Late Pleistocene, Late Vistulian, Allerød: *Cervus elaphus*, *Alces alces*, *Capreolus capreolus*, *Rangifer tarandus*.