

Publication list, Michael Hofreiter

1. Publications in scientific journals

Peer-reviewed research articles

2016

1. Fortes, G.G., Grandal-d'Anglade, A., Kolbe, B., Fernandes, D., Meleg, I.N., García-Vázquez, A., Pinto-Llona, A.C., Constantin, S., de Torres, T.J., Ortiz, J.E., Frischauf, C., Rabeder, G., **Hofreiter, M** and Barlow, A. (2016) Ancient DNA reveals differences in behaviour and sociality between brown bears and extinct cave bears. *Molecular Ecology*, **published online 10th August 2016**, doi: **10.1111/mec.13800**.
2. Wutke, S., Andersson, L., Benecke, N., Sandoval-Castellanos, E., Gonzalez, J., Hallsson, J.H., Lõugas, L., Magnell, O., Morales-Muniz, A., Orlando, L., Pálsdóttir, A.H., Reissmann, M., Muñoz-Rodríguez, M.B., Ruttkay, M., Trinks, A., **Hofreiter, M.** and Ludwig A. (2016) The origin of ambling horses. *Current Biology*, **26 (15)**, R697-9 (published online 8th August 2016, doi: 10.1016/j.cub.2016.07.001).
3. Gallego-Llorente, M., Connell, S., Jones, E.R., Merrett, D.C., Jeon, Y., Eriksson, A., Siska, V., Gamba, C., Meiklejohn, C., Beyer, R., Jeon, S., Cho, Y.S., **Hofreiter, M.**, Bhak, J., Manica, A. and Pinhasi R. (2016) The genetics of an early Neolithic pastoralist from the Zagros, Iran. *Scientific Reports*, **6**, 31,326 (published online 9th August 2016, doi: 10.1038/srep31326).
4. Speller, C., van den Hurk, Y., Charpentier, A., Rodrigues, A., Gardeisen, A., Wilkens, B., McGrath, K., Rowsell, K., Spindler, L., Collins, M. and **Hofreiter M.** (2016) Barcoding the largest animals on Earth: ongoing challenges and molecular solutions in the taxonomic identification of ancient cetaceans. *Philos Trans R Soc Lond B Biol Sci.*, **371 (1702)**, pii: 20150332 (doi: 10.1098/rstb.2015.0332).
5. Elsner, J., Deschler-Erb, S., Stopp, B., **Hofreiter, M.**, Schibler, J. and Schlumbaum, A. (2016) Mitochondrial d-loop variation, coat colour and sex

identification of Late Iron Age horses in Switzerland. *Journal of Archaeological Science: Reports* **6**, 386–396 (doi: dx.doi.org/10.1016/j.jasrep.2016.03.007).

6. Mohandesan, E., Speller, C.F., Peters, J., Uerpmann, H.P., Uerpmann, M., De Cupere, B., **Hofreiter, M.** and Burger, P.A. (2016) Combined hybridization capture and shotgun sequencing for ancient DNA analysis of extinct wild and domestic dromedary camel. *Molecular Ecology Resources*, **published online 11th June 2016**, doi: **10.1111/1755-0998.12551**.
7. Almathen, F., Charruau, P., Mohandesan, E., Mwacharo, J.M., Orozco-Wengel, P., Pitt, D., Abdussamad, A.M., Uerpmann, M., Uerpmann, H.P., De Cupere, B., Magee, P., Alnaqeeb, M.A., Salim, B., Raziq, A., Dessie, T., Abdelhadi, O.M., Banabazi, M.H., Al-Eknah, M., Walzer, C., Faye, B., **Hofreiter, M.**, Peters, J., Hanotte, O., Burger, P.A. (2016) Ancient and modern DNA reveal dynamics of domestication and cross-continental dispersal of the dromedary. *Proc Natl Acad Sci USA*, **113 (24)**, 6707-6712 (published online 9th May 2016, doi: 10.1073/pnas.1519508113).
8. Rainford, J.L., **Hofreiter, M.** and Mayhew, P.J. (2016) Phylogenetic analyses suggest that diversification and body size evolution are independent in insects. *BMC Evol Biol*, **16**, 8 (doi: 10.1186/s12862-015-0570-3).

2015

9. Jones, E.R., Gonzalez-Fortes, G., Connell, S., Siska, V., Eriksson, A., Martiniano, R., McLaughlin, R.L., Gallego-Llorente, M., Cassidy, L.M., Gamba, C., Meshveliani, T., Bar-Yosef, O., Müller, W., Belfer-Cohen, A., Matskevich, Z., Jakeli, N., Higham, T.F., Currat, M., Lordkipanidze, D., **Hofreiter, M.**, Manica, A., Pinhasi, R. and Bradley, D.G. (2016) Upper Palaeolithic genomes reveal deep roots of modern Eurasians. *Nat Commun* **6**, 8912 (doi: 10.1038/ncomms9912).
10. Gallego-Llorente, M., Jones, E.R., Eriksson, A., Siska, V., Arthur, K.W., Arthur, J.W., Curtis, M.C., Stock, J.T., Coltorti, M., Pieruccini, P., Stretton, S., Brock, F., Higham, T., Park, Y., **Hofreiter, M.**, Bradley, D.G., Bhak, J., Pinhasi, R. and Manica, A. (2015) Ancient Ethiopian genome reveals

extensive Eurasian admixture throughout the African continent. *Science* **350** (6262), 820-822 (published online 8th Oct 2015; doi: 10.1126/science.aad2879).

11. Li, C., Corrigan, S., Yang, L., Straube, N., Harris, M., **Hofreiter, M.**, White, W. and Naylor, G.J.P. (2015) DNA capture reveals transoceanic gene flow in endangered river sharks. *Proc. Natl. Acad. Sci. U S A*, **112** (43), 13,302-13,307 (doi: 10.1073/pnas.1508735112; published online 12th Oct 2015).
12. Le Duc, D., Renaud, G., Krishnan, A., Almén, M.S., Huynen, L., Prohaska, S.J., Ongyerth, M., Bitarello, B.D., Schiöth, H.B., **Hofreiter, M.**, Stadler, P.F., Prüfer, K., Lambert, D., Kelso, J. and Schöneberg, T. (2015) Kiwi genome provides insights into evolution of a nocturnal lifestyle. *Genome Biology*, **16**, 147 (published online 23rd July 2015, doi: 10.1186/s13059-015-0711-4).
13. Pinhasi, R., Fernandes, D., Sirak, K., Novak, M., Connell, S., Alpaslan-Roodenberg, S., Gerritsen, F., Moiseyev, V., Gromov, A., Raczky, P., Anders, A., Pietrusewsky, M., Rollefson, G., Jovanovic, M., Trinhhoang, H., Bar-Oz, G., Oxenham, M., Matsumura, H. and **Hofreiter, M.** (2015) Optimal Ancient DNA Yields from the Inner Ear Part of the Human Petrous Bone. *PLoS One*, **10** (6), e0129102 (published online 18th June 2015, doi: 10.1371/journal.pone.0129102 eCollection 2015).
14. Springer, M.S., Signore, A.V., Paijmans, J.L., Vélez-Juarbe, J., Domning, D.P., Bauer, C.E., He, K., Crerar, L., Campos, P.F., Murphy, W.J., Meredith, R.W., Gatesy, J., Willerslev, E., MacPhee, R.D., **Hofreiter, M.** and Campbell K.L. (2015) Interordinal gene capture, the phylogenetic position of Steller's sea cow based on molecular and morphological data, and the macroevolutionary history of Sirenia. *Molecular Phylogenetics and Evolution*, **91**, 178-193 (published online 4th June 2015, doi: 10.1016/j.ympev.2015.05.022).
15. Paijmans, J.L.A., Fickel, J., Courtiol, A., **Hofreiter, M.** and Förster, D.W. (2015) Impact of enrichment conditions on cross-species capture of fresh and degraded DNA. *Molecular Ecology Resources*, **16** (1), 42-55 (published online 27th April 2015, doi: 10.1111/1755-0998.12420).
16. Alter, S. E., Meyer M., Post, K., Czechowski, P., Gravlund, P., Gaines, C., Rosenbaum, H., Kaschner, K., Turvey, S.T., van der Plicht, J., Shapiro, B. and **Hofreiter, M.** (2015) Climate impacts on transocean dispersal and habitat in

gray whales from the Pleistocene to 2100. *Molecular Ecology*, **24** (7), 1510-1522 (published online 9th March 2015, doi: 10.1111/mec.13121).

17. Welcker, F., Collins, M.J., Thomas, J.A., Wadsley, M., Brace, B., Cappellini, E., Turvey, S.T., Reguero, M., Gelfo, J.N., Kramarz, A., Burger, J., Thomas-Oates, J., Ashford, D.A., Ashton, P., Rowsell, K., Porter, D.M., Kessler, B., Fisher, R., Baessmann, C., Kaspar, S., Olsen, J., Kiley, P., Elliot, J., Kelstrup, C., Mullin, V., **Hofreiter, M.**, Willerslev, E., Hublin, J.-J., Orlando, L., Barnes I. & MacPhee, R.D.E. (2015) Ancient proteins resolve the evolutionary history of Darwin's South American ungulates. *Nature*, **522** (7554), **81-84** (published online 18th March 2015, doi: 10.1038/nature14249).
18. Ludwig, A., Reissmann, M., Benecke, N., Bellone, R., Sandoval-Castellanos, E., Cieslak, M., Fortes, G.G., Morales-Muñiz, A., **Hofreiter, M.** and Pruvost, M. (2015) Twenty-five thousand years of fluctuating selection on leopard complex spotting and congenital night blindness in horses. *Phil Trans R Soc B*, **370** (1660), 20130386 (doi: 10.1098/rstb.2013.0386).
19. Teasdale, M.D., van Doorn, N.L., Fiddyment, S., Webb, C., O'Connor, T., **Hofreiter, M.**, Collins, M.J. and Bradley, D.G. (2015) Paging through history: parchment as a reservoir of ancient DNA for next generation sequencing. *Phil Trans R Soc B*, **370** (1660), 20130379 (doi: 10.1098/rstb.2013.0379).
20. Elsner, J., Schibler, J., **Hofreiter, M.** and Schlumbaum, A. (2015) Burial condition is the most important factor for mtDNA PCR amplification success in Palaeolithic equid remains from the Alpine foreland. *Archaeological and Anthropological Sciences*, **1-11** (DOI 10.1007/s12520-014-0213-4).
21. Elsner, J., Schibler, J., **Hofreiter, M.** and Schlumbaum, A. (2015) Burial condition is the most important factor for mtDNA PCR amplification success in Palaeolithic equid remains from the Alpine foreland. *Archaeological and Anthropological Sciences*, **1-11** (DOI 10.1007/s12520-014-0213-4).

2014

22. Schubert, M., Jónsson, H., Chang, D., Der Sarkissian, C., Ermini, L., Ginolhac, A., Albrechtsen, A., Dupanloup, I., Foucal, A., Petersen, B., Fumagalli, M., Raghavan, M., Seguin-Orlando, A., Korneliusen, T.,

- Velazquez, A.M.V., Stenderup, J., Hoover, C.A., Rubin, C.J., Alfarhan, A.H., Alquraishi, S.A., Al-Rasheid, K.A.S., MacHugh, D.E., Kalbfleish, T., MacLeod, J.N., Rubin, E.M., Sicheritz-Ponten, T., Andersson, L., **Hofreiter, M.**, Marques-Bonet, T., Gilbert, M.T.P., Nielsen, R., Excoffier, L., Willerslev, E., Shapiro, B. and Ludovic Orlando, L. (2014) Prehistoric horse genomes reveal the genetic foundation and cost of domestication. *Proc. Natl. Acad. Sci. U S A*, **111** (52), E5661-9 (published online 15th December 2014; doi: 10.1073/pnas.1416991111).
23. Xiang, H., Yuan, J., Gao, J., Yu, B., Luo, Y., Zhou, H., Cai, D., Zhang, Y., Chen, X., Wang, X., **Hofreiter, M.** and Zhao, X. (2014) Early Holocene chicken domestication in northern China. *Proc. Natl. Acad. Sci. U S A*, **111** (49), 17564-9 (published online 24th November 2014; doi: 10.1073/pnas.1411882111).
24. King, T.E., Gonzalez Fortes, G., Balaesque, P., Thomas, M.G., Balding, D., Maisano Delsler, P., Neumann, R., Parson, W., Knapp, M., Walsh, S., Tonasso, L., Holt, J., Kayser, M., Appleby, J., Forster, P., Ekserdjian, D., **Hofreiter M.** and Kevin Schürer, K. (2014) Identification of the remains of King Richard III. *Nature Communications*, **5**, 5631 (published online 2nd December; doi: 10.1038/ncomms6631).
25. Rainford, J.L., **Hofreiter, M.**, Nicholson, D.B. and Mayhew, P.J. (2014) Phylogenetic distribution of extant richness suggests metamorphosis is a key innovation driving diversification in insects. *PLoS One*, **9** (9), e109085.
26. Gamba, C., Jones, E.R., Teasdale, M.D., McLaughlin, R.L., Gonzalez-Fortes, G., Mattiangeli, V., Domboróczki, L., Kóvári, I., Pap, I., Anders, A., Whittle, A., Dani, J., Raczky, P., Higham, T.F.G., **Hofreiter, M.**, Bradley, D.G., and Pinhasi, R., (2014) Genome flux and stasis in a five millennium transect of European prehistory. *Nature Communications*, **5**, 5257 (published online 21st Oct 2014; doi: 10.1038/ncomms6257).
27. Mitchell, K.J., Pratt, R.C., Watson, L.N., Gibb, G.C., Llamas, B., Kasper, M., Edson, J., Hopwood, B., Male, D., Armstrong, K., Meyer, M., **Hofreiter, M.**, Austin, J., Donnellan, S.C., Lee, M.S.Y., Phillips, M.J. and Cooper, A. (2014) Molecular phylogeny, biogeography, and habitat preference evolution of

marsupials. *Molecular Biology and Evolution*, **31** (9), 2322-2330 (published online 30th May 2014; doi: 10.1093/molbev/msu176).

28. Huynen, L., Suzuki, T., Ogura, T., Watanabe, Y., Millar, C.D., **Hofreiter, M.**, Smith, C., Mirmoeini, S. and Lambert, D.M. (2014) Reconstruction and in vivo analysis of the extinct *tbx5* gene from ancient wingless moa (Aves: Dinornithiformes). *BMC Evol Biol*, **14**, 75 (published online 14th May 2014; doi: 10.1186/1471-2148-14-75).
29. Horn, S., Prost, S., Stiller, M., Makowiecki, D., Kusnetsova, T., Benecke, N., Pucher, E., Hufthammer, A.K., Schouwenburg, C., Shapiro, B. and **Hofreiter, M.** (2014) Ancient mitochondrial DNA and the genetic history of Eurasian beaver (*Castor fiber*) in Europe. *Molecular Ecology*, **23**, 1717–1729 (published online 12th February 2014; doi: 10.1111/mec.12691).
30. Stiller, M., Molak, M., Prost, S., Pacher, M., Rabeder, G., Baryshnikov, G., Rosendahl, W., Münzel, S., Bocherens, H., Grandal-d'Anglade, A., Hilpert, B., Germonpre, M., Stasyk, O., Pinhasi, R., Rohland, N., Mohandesan, E., Ho, S.Y.W., **Hofreiter, M.** and Knapp, M. (2014) Mitochondrial DNA diversity and evolution of the Pleistocene cave bear complex. *Quaternary International*, **339-340**, 224-231 (published online 5th November 2013; <http://dx.doi.org/10.1016/j.quaint.2013.09.023>).

2013

31. Zhang, H., Pajmans, J.L.A., Chang, F., Wu, X., Chen, G., Lei, C., Yang, X., Wei, Z., Bradley, D.G., Orlando, L., O'Connor, T. and **Hofreiter, M.** (2013) Morphological and genetic evidence for early Holocene cattle management in North-Eastern China. *Nature Communications*, **4**, 2755 (published online 8th November 2013; doi: 10.1038/ncomms3755).
32. Bellone, R.B., Holl, H., Setaluri, V., Devi, S., Maddodi, N., Archer, S., Sandmeyer, L., Ludwig, A., Foerster, D., Pruvost, M., Reissmann, M., Bortfeldt, R., Adelson, D.L., Lim, S.L., Nelson, J., Haase, B., Engensteiner, M., Leeb, T., e Forsyth, G., Mienaltowski, M.J., **Hofreiter, M.**, Pajmans, J.L.A., Gonzalez-Fortes, G., Grahn, B. and Brooks, S.A. (2013) RNA sequencing identifies retroviral insertion in TRPM1 as the cause of congenital

stationary night blindness and leopard complex spotting in the horse. *PLoS One*, **8** (10), e78280 (published online 22nd October 2013; doi: 10.1371/journal.pone.0078280).

33. Finstermeier, K., Zinner, D., Brameier, M., Meyer, M., Kreuz E. **Hofreiter, M.** and Roos, C. (2013) A mitogenomic phylogeny of living primates. *PLoS One*, **8** (7), e69504 (published online 16th July 2013; doi: 10.1371/journal.pone.0069504).
34. Orlando, L., Ginolhac, A., Zhang, G. and 47 co-authors, **Hofreiter, M.**, Nielsen, N., Shapiro, B., Jun, W. and Willerslev, E. (2013) Recalibrating *Equus* evolution using the genome sequence of an Early Middle Pleistocene horse. *Nature*, **499** (7456), 74-78 (published online 26th June 2013; doi: 10.1038/nature12323).
35. Bocherens, H., Bridault, A., Drucker, D.G., **Hofreiter, M.**, Münzel, S.C., Stiller, M. and van der Plicht, J. (2013) The last of its kind? Radiocarbon, ancient DNA and stable isotope evidence from a late cave bear (*Ursus spelaeus* ROSENMÜLLER, 1794) from Rochedane (France), *Quaternary International*, **339-340**, 179-188 (published online 21st May 2013; <http://dx.doi.org/10.1016/j.quaint.2013.05.021>).
36. Li, C., **Hofreiter, M.**, Straube, N., Corrigan, S. and Naylor, G.J.P. (2013) Capturing protein-coding genes across highly divergent species. *Biotechniques*, **54**, 321-326 (doi: 10.2144/000114039).
37. Prost, S., Guralnick, R.P., Waltari, E., Fedorov, V.B., Kuzmina, E., Smirnov, N., van Kolfschoten, T., **Hofreiter, M.** and Vrieling, K. (2013) Losing ground: past history and future fate of Arctic small mammals in a changing climate. *Glob Chang Biol*, **19** (6), 1854-1864 (published online 31st January; doi: 10.1111/gcb.12157).
38. Prost, S., Klietmann, J., van Kolfschoten, T., Guralnick, R.P., Waltari, E., Vrieling, K., Stiller, M., Nagel, D., Rabeder, G., **Hofreiter, M.** and Sommer, R.S. (2013) Effects of late quaternary climate change on Palearctic shrews. *Glob Chang Biol*, **19** (6), 1865-1874 (published online 28th January; doi: 10.1111/gcb.12153).

39. Haus, T., Akom, E., Agwanda, B., **Hofreiter, M.**, Roos, C. and Zinner, D. (2013) Mitochondrial diversity and distribution of African green monkeys (*Chlorocebus* Gray, 1870). *Am J Primatol.* **75** (4), 350-360 (published online 10th January 2013; doi: 10.1002/ajp.22113).

2012

40. Bruche, S., Gusset, M., Lippold, S., Eulenberger, K., Junhold, J., Driscoll, C. A. and **Hofreiter, M.** (2012) A genetically distinct lion (*Panthera leo*) population from Ethiopia. *Eur J Wildl Res* **59**, 215–225 (published online 9th October 2012; doi: 10.1007/s10344-012-0668-5).
41. Jenkins, D.L., Davis, L., Stafford, Jr., T.W., Campos, P., Hockett, B., Jones, G.T., Cummings, L.S., Yost, C., Connolly, T.J., Yohe II, R.M., Gibbons, S.C., Raghavan, M., Rasmussen, M., Paijmans, J.L.A., **Hofreiter, M.**, M. Kemp, B.M., Barta, J.L., Cara Monroe, C., Gilbert, M.T.P. and Willerslev, E. (2012) Clovis Age Western Stemmed projectile points and human coprolites at the Paisley Caves. *Science*, **337** (6091), 223-8.
42. Baca, M., Stankovic, A., Marciszak, A., **Hofreiter, M.**, Nadachowski, A., Stefaniak, K., Węgleński, P. and Mackiewicz, P. (2012) Genetic Analyses of Cave Bear specimens from Niedźwiedzia Cave, Sudetes, Poland. *Palaeontologia Electronica*, **15** (2), 21A, 16p.

2011

43. Gravlund, P., Aaris-Sørensen, K., **Hofreiter, M.**, Meyer, M., Bollback J.P. and Noe-Nygaard N. (2011) Ancient DNA extracted from Danish aurochs (*Bos primigenius*): genetic diversity, genealogical history and preservation. *Annals of Anatomy*, **194** (1), 103-111 (published online 17th November).
44. Lippold, S., Matzke, N., Reißman, M., and **Hofreiter, M.** (2011) Whole mitochondrial genome sequencing of domestic horses reveals incorporation of extensive wild horse diversity during domestication. *BMC Evol Biol*, **11**, 328 (published online 14th November).

45. Lorenzen, E., Noguès-Bravo, D., Orlando, L., Weinstock, J., Binladen, J., Marske, K. A., Haile, J., and 47 co-authors, Wayne, R. K., Cooper, A., **Hofreiter, M.**, Sher, A., Shapiro, B., Rahbek, C. and Willerslev, E. (2011) Individualistic species responses to climate and humans determine Late Quaternary megafaunal extinction and survival. *Nature*, **479 (7373)**, 359-64 (published online 2nd November; doi: 10.1038/nature10574).
46. Pruvost, M. Bellone, R., Benecke, N., Sandoval-Castellanos, E., Cieslak, M., Kuznetsova, T., Morales, A., O'Connor, T., Reissmann, M., **Hofreiter, M.** and Ludwig, A. (2011) Genotypes of pre-domestic horses match phenotypes painted in Paleolithic works of cave art. *Proc. Natl. Acad. Sci. U S A*, **108 (46)**, 18626-18630 (published online 7th November 2011; doi: 10.1073/pnas.1108982108).
47. Lerner, H. R. L., Meyer, M., James, H. F., **Hofreiter, M.** and Fleischer, R. C. (2011) Multilocus resolution of phylogeny and timescale in the extant adaptive radiation of Hawaiian honeycreepers. *Current Biology*, **21 (21)**, 1838-1844 (published online 21st October 2011; doi:1 0.1016/j.cub.2011.09.039).
48. Orlando, L., Ginolhac, A., Raghavan, M., Vilstrup, J., Rasmussen, M., Magnussen, K., Steinmann, K., Kapranov, P., Thompson, J. F., Zazula, G., Froese, D., Moltke, I., Shapiro, B., **Hofreiter, M.**, AL-Rasheid, K. A. S., Mundy, J., M. Gilbert¹, M. T. P. and Willerslev, E. (2011) True Single-Molecule DNA Sequencing of a Pleistocene Horse bone. *Genome Research*, **21 (10)**, 1705-19 (published online 29th July 2011).
49. Lippold, S., Allentoft, M., Benecke, N., Koepfli, K.-P., Kuznetsova, T., Ludwig, A., Weinstock, J., Willerslev, E., Shapiro, B. and **Hofreiter, M.** (2011) Discovering the lost diversity of paternal horse lineages using ancient DNA. *Nature Communications*, **2**, 450 (published online 23rd August 2011, doi: 10.1038/ncomms1447).
50. Yuan, Y., Shen, T. J., Gupta, P., Ho, N. T., Simplaceanu, V., Tam, T. C., **Hofreiter, M.**, Cooper, A., Campbell, K. L. and Ho, C. (2011) A biochemical-biophysical study of hemoglobins from woolly mammoth, asian elephant, and humans. *Biochemistry* **50 (34)**, 7350-7360 (published online 2nd August 2011).

51. Münzel, S. C., Stiller, M., **Hofreiter, M.**, Mittnik, A., Conard, N. J. and Bocherens, H. (2011) Pleistocene bears in the Swabian Jura (Germany): genetic replacement, ecological displacement, extinctions and survival. *Quaternary International*, **245** (2), 225-237 (published online 22nd April 2011; doi:10.1016/j.quaint.2011.03.060).
52. Baar, C., d'Abbadie, M., **Hofreiter, M.**, Vaisman, A., Woodgate, R., Arana, M. E., Kunkel T. A. and Holliger, P. (2011) Molecular breeding of polymerases with resistance to environmental inhibitors. *Nucleic Acids Research*, **39** (8), e51 (published online 4th February 2011, doi: 10.1093/nar/gkq1360).
53. Horn, S., Durka, W., Wolf, R., Ermala, A., Stubbe, A., Stubbe, M. and **Hofreiter, M.** (2011) Mitochondrial genomes reveal slow rates of molecular evolution and the timing of speciation in beavers (*Castor*), one of the largest rodent species. *PLoS One*, **6** (1): e14622 (published online 28th January 2011, doi: 10.1371/journal.pone.0014622).

2010

54. Bocherens, H., Stiller, M., Hobson, K., Pacher, M., Rabeder, G., Burns, J. A., Tütken, T. and **Hofreiter, M.** (2010) Niche partition between two sympatric genetically distinct of cave bears (*Ursus spelaeus* and *Ursus ingressus*) and brown bear (*Ursus arctos*) from Austria: isotopic evidence from fossil bones. *Quaternary International*, **245** (2), 238-248 (published online 25th December 2010; doi:10.1016/j.quaint.2010.12.020).
55. Cieslak, M., Pruvost, M., Benecke, N., **Hofreiter, M.**, Morales, A., Reißmann M. and Ludwig, A. (2010) Origin and history of mitochondrial DNA lineages in domestic horses. *PLoS One*, **5** (12): e15311 (published online 20th December 2010, doi: 10.1371/journal.pone.0015311).
56. Rohland, N., Reich, D., Mallick, S., Meyer, M., Green, R.E., Georgiadis, N.J., Roca, A., and **Hofreiter, M.** (2010) Genomic DNA sequences from mastodon and woolly mammoth reveal deep speciation of forest and savanna elephants. *PLoS Biology*, **8** (12), e1000564 (published online 21st December 2010, doi:10.1371/journal.pbio.1000564).

57. Campos, P.F., Kristensen, T., Orlando, L., Sher, A., Kholodova, M.V., Götherström, A., **Hofreiter, M.**, Drucker, D.G., Kosintsev, P., Tikhonov, A., Baryshnikov, G. F., Willerslev, E. and Gilbert, M.T.P. (2010) Ancient DNA sequences point to a large loss of genetic diversity in the saiga antelope (*Saiga tatarica*) since the Pleistocene. *Molecular Ecology*, **19** (22), 4863-4875 (published online 27th September 2010, doi: 10.1111/j.1365-294X.2010.04826.x).
58. Prost, S., Knapp, M., Stiller, M., Flemming, J. and **Hofreiter, M.** (2010) A phantom extinction? New insights into extinction dynamics of the Don-hare *Lepus tanaicus*. *Journal of Evolutionary Biology*, **23** (9), 2022-2029 (published online 31st July 2010; doi:10.1111/j.1420-9101.2010.02062.x).
59. Heyn, P., Stenzel, U., Briggs, A. W., Kircher, M., **Hofreiter, M.** and Meyer, M. (2010) Uncovering the frequency of blocking lesions in ancient DNA. *Nucleic Acids Research*, **38** (16), e161 (published online 28th June 2010; doi:10.1093/nar/gkq572).
60. Prüfer, K., Stenzel, U., **Hofreiter, M.**, Pääbo, S., Kelso, J. and Green, R. E. (2010) Computational challenges in the analysis of ancient DNA. *Genome Biology*, **11**, R47 (published online 6th May 2010; doi:10.1186/gb-2010-11-5-r47).

Highly accessed article.

61. Prost, S., Smirnov, N., Fedorov, V. B., Sommer, R. S., Stiller, M., Nagel, D., Knapp M. and **Hofreiter M.** (2010) Influence of climate warming on arctic mammals? New insights from ancient DNA studies of the collared lemming *Dicrostonyx torquatus*. *PLoS One*, **5** (5), e10447 (published online 27th May 2010).
62. Campbell, K.L., Roberts, J.E.E., Watson, L.N., Stetefeld, J., Sloan, A.M., Signore, A.V., Tame, J.R.H., Rohland, N., Shen, T.-J., Austin, J.J., **Hofreiter, M.**, Ho, C., Weber, R.E. and Cooper, A. (2010) Substitutions in woolly mammoth hemoglobin confer biochemical properties adaptive for cold tolerance. *Nature Genetics*, **42** (6), 536-40 (published online 2nd May 2010).
63. Stiller, M., Baryshnikov, G., Bocherens, H., Grandal d'Anglade, A., Hilpert, B., Münzel, S.C., Pinhasi, R., Rabeder, G., Rosendahl, W., Trinkaus, E.,

Hofreiter, M. and Knapp, M. (2010) Withering away - 25,000 years of genetic decline preceded cave bear extinction. *Molecular Biology and Evolution*, **27** (5), 975-978 (published online 24th March 2010).

64. Asher, R.J., Maree, S., Bronner, G., Bennett, N., Bloomer, P., Czechowski, P., Meyer, M. and **Hofreiter, M.** (2010) A phylogenetic estimate for golden moles (Mammalia, Afrotheria, Chrysochloridae). *BMC Evolutionary Biology*, **10** (1), 69 (published online 9th March 2010).
65. **Hofreiter, M.**, Kreuz, E., Eriksson, E., Schubert, G., and Hohmann G. (2010) Vertebrate DNA in fecal samples from bonobos and gorillas: Evidence for meat consumption or artefact? *PLoS One*, **5** (2), e9419 (published online 25th February 2010).

2009

66. Rohland, N., Siedel H. and **Hofreiter, M.** (2009) A rapid column-based ancient DNA extraction method for increased sample throughput. *Molecular Ecology Resources*, **10** (4), 677-683 (published online 29th December 2009; DOI 10.1111/j.1755-0998.2009.02824.x).
67. Campos, P., Willerslev, E., Mead, J., **Hofreiter, M.** and Gilbert, M.T.P. (2009) Molecular Identification of the Extinct Mountain Goat, *Oreamnos harringtoni* (Bovidae). *Boreas*, **39**, 18-23 (published online 14th July 2009. DOI 10.1111/j.1502-3885.2009.00111.x).
68. Stiller, M., Knapp, M., Stenzel, U., **Hofreiter, M.** and Meyer, M. (2009) Direct multiplex sequencing (DMPS) – a novel method for targeted high-throughput sequencing of ancient and highly degraded DNA. *Genome Research*, **19** (10), 1843-1848 (published online 27rd July 2009).
69. Collins, M.J., Penkman, K.E.H., Rohland, N., Shapiro, B., Dobberstein, R.C., Ritz-Timme, S. and **Hofreiter, M.**, (2009) Is amino acid racemization a useful tool for screening for ancient DNA in bone? *Proceedings of the Royal Society B*, **276** (1669), 2971-7 (published online 3rd June 2009).

Listed under “Research Highlights” in *Nature* **459**, 618 (2009).

70. Ludwig, A., Pruvost, M., Reissmann, M., Benecke, N., Brockmann, G.A., Castaños, P., Cieslak, M., Lippold, S., Llorente, L., Malaspinas, A.-S., Slatkin, M. and **Hofreiter, M.** (2009) Coat color variation at the beginning of horse domestication. *Science* **324**, 485.
71. Knapp, M., Rohland, N., Weinstock, J., Baryshnikov, G., Sher, A., Nagel, D., Rabeder, G., Pinhasi, R., Schmitt, H., and **Hofreiter, M.** (2009) First DNA sequences from Asian cave bear fossils reveal deep divergences and complex phylogeographic patterns. *Molecular Ecology* **18** (6), 1225-38.
72. Germonpre, M., Sablin, M.V., Stevens, R.E., Hedges, R.E.M., **Hofreiter, M.**, Stiller, M. and Després, V.R. (2009) Fossil dogs and wolves from Palaeolithic sites in Belgium, the Ukraine and Russia: osteometry, ancient DNA and stable isotopes. *Journal of Archaeological Science*, **36**, 473-490 (published online 7th October 2008 DOI: 10.1016/j.jas.2008.09.033).

2008

73. Krause, J., Unger, T., Noçon, A., Malaspinas, A.-S., Kolokotronis, S.O., Stiller, M., Soibelzon, L., Spriggs, H., Dear, P.H., Briggs, A.W., Bray, S.C. E., O'Brien, S., Rabeder, G., Matheus, P., Cooper, A., Slatkin, M., Pääbo, S., and **Hofreiter, M.** (2008) Mitochondrial genomes reveal an explosive radiation of extinct and extant bears near the Miocene-Pliocene boundary. *BMC Evol Biol.* **8**, 220 (published online 28th July 2008).

Highly accessed article.

74. Rabeder, G., Debeljak, I., **Hofreiter, M.** and Withalm, G. (2008) Morphological responses of cave bears (*Ursus spelaeus* group) to High-alpine Habitats. *Die Höhle* **59**, 59-72.
75. Gilbert, M.T.P., Jenkins, D.L., Götherstrom, A., Naveran, N., Sanchez, J.J., **Hofreiter, M.**, Thomsen, P.F., Binladen, J., Higham, T.F., Yohe, R.M.II, Parr, R., Cummings, L.S. and Willerslev, E. (2008) DNA from pre-Clovis human coprolites in Oregon, North America. *Science*, **320** (5877), 786-9 (published online 3rd April 2008).

76. Mohandesan, E., Mowla, S.J., Hejbari Noobari, A. and **Hofreiter, M.** (2008) Ancient DNA from human and animal remains from North-West Iran. *Journal of Sciences, Islamic Republic of Iran* **19** (1), 3-8.
77. Valdiosera, C.E., García-Garitagoitia, J.L., Garcia, N., Doadrio, I., Thomas, M.G., Hänni, C., Arsuaga, J.L., Barnes, I., **Hofreiter, M.**, Orlando, L. and Götherström, A. (2008) Surprising migration and population size dynamics in ancient Iberian brown bears (*Ursus arctos*). *Proc. Natl. Acad. Sci. U S A*, **105** (13), 5123-8 (published online, 17th March 2008).
78. Richards, M.P., Pacher, M., Stiller, M., Quilès, J., **Hofreiter, M.**, Constantin, S., Zilhão, J. and Trinkaus, E. (2008) Isotopic evidence for omnivory among European cave bears: Late Pleistocene *Ursus spelaeus* from the Peștera cu Oase, Romania. *Proc. Natl. Acad. Sci. U S A*, **105** (2), 600-604 (published online, 10th January 2008).
79. Meyer, M., Stenzel, U., and **Hofreiter, M.** (2008) Parallel tagged sequencing on the 454 platform. *Nature Protocols*, **3** (2), 267-278.
80. Meyer, M., Briggs, A.W., Maricic, M., Höber, B., Höffner, B., Krause, J., Weihmann, A., Pääbo, S. and **Hofreiter, M.** (2008) From micrograms to picograms: quantitative PCR reduces the material demands of high-throughput sequencing. *Nucleic Acids Research*, **36** (1), e5 (published online, 15th December 2007).

2007

81. Lalueza-Fox, C., Römpler, H., Caramelli, D., Stäubert, C., Catalano, G., Hughes, D., Rohland, N., Pilli, E., Longo, L., Condemi, S., de la Rasilla, M., Fortea, J., Rosas, A., Stoneking, M., Schöneberg, T., Bertranpetit, J. and **Hofreiter, M.** (2007) A melanocortin 1 receptor allele suggests varying pigmentation among Neanderthals. *Science*, **318** (5855), 1453-5 (published online, 25th October 2007).
82. Meyer, M., Stenzel, U., Myles, S., Prüfer, K. and **Hofreiter, M.** (2007) Targeted high-throughput sequencing of tagged nucleic acid samples. *Nucleic Acids Research* **35** (15), e97 (published online 1st August 2007).

83. Rohland, N. and **Hofreiter, M.** (2007) Ancient DNA extraction from bones and teeth. *Nature Protocols* (invited protocol), **2 (7)**, 1756-62.
84. Rohland, N., Malaspinas, A.-S., Pollack, J.L., Slatkin, M., Matheus, P. and **Hofreiter, M.** (2007) Proboscidean mitogenomics: chronology and mode of elephant evolution using mastodon as outgroup. *PLoS Biology*, **5 (8)**, e207, 1663-1671.
85. d'Abbadie, M., **Hofreiter, M.**, Vaisman, A., Loakes, D., Gasparutto, D., Cadet, J., Wodgate, R., Pääbo, S. and Holliger, P. (2007) Molecular breeding of polymerases for amplification of ancient DNA. *Nature Biotechnology*, **25 (8)**, 939-43 (published online 15th July 2007).
86. Leonard, J.A., Shanks, O., **Hofreiter, M.**, Kreuz, E., Hodges, L., Ream, W., Wayne, R.K. and Fleischer R.C. (2007) Animal DNA in PCR reagents plagues ancient DNA research. *Journal of Archaeological Science*, **34**, 1361-1366.
87. Willerslev, E., Cappellini, E., Boomsma, W., Nielsen, R., Hebsgaard, M.B., Brand, T.B., **Hofreiter, M.**, Bunce, M., Poinar, H.N., Dahl-Jensen, D., Johnson, S., Steffensen, J.P., Bennike, O., Schwenninger, J.-L., Nathan, R., Armitage, S., De Hoog, J.C.M., Alfimov, V., Christl, M., Beer, J., Muscheler, R., Barker, J., Sharp, M., Penkman, K.E.H., Haile, J., Taberlet, P., Gilbert, M. T.P., Casoli, A., Campani, E. and Collins, M. J. (2007) Ancient Biomolecules from deep ice cores reveal a forested southern Greenland. *Science*, **317**, 111-114.
88. **Hofreiter, M.**, Münzel, S., Conard, N. J., Pollack, J., Weiss, G. and Pääbo, S. (2007) Sudden replacement of cave bear mitochondrial DNA in the late Pleistocene. *Current Biology*, **17 (4)**, R122-123.
89. Rohland, N. and **Hofreiter, M.** (2007) Comparison and optimization of ancient DNA extraction. *Biotechniques*, **42 (3)**, 343-352.

2006

90. Stiller, M., Green, R.E., Ronan, M., Simons, J.F., Du, L., He, W., Egholm, M., Rothberg, J.M., Keats, S.G., Ovodov, N.D., Antipina, E.E., Baryshnikov, G.F., Kuzmin, Y.V., Vasilevski, A.A., Wuenschell, G.E., Termini, J., **Hofreiter, M.**, Jaenicke-Despres, V. and Pääbo, S. (2006) Patterns of nucleotide

misincorporations during enzymatic amplification and direct large-scale sequencing of ancient DNA. *Proc. Natl. Acad. Sci. USA*, **103** (37), 13,578-13,584.

91. Römpler, H., Dear, P.H., Krause, J., Meyer, M., Rohland, N., Schöneberg, T., Spriggs, H., Stiller, M. and **Hofreiter, M.** (2006) Multiplex amplification of ancient DNA. *Nature Protocols* (invited protocol), **1** (2), 720-728.
92. Römpler, H. Rohland, N., Lalueza-Fox, C., Willerslev, E., Kuznetsova, T., Rabeder, G., Bertranpetit, J., Schöneberg, T. and **Hofreiter, M.** (2006) Nuclear gene indicates coat-color polymorphism in mammoths. *Science*, **313** (5783), 62.
93. Asher, R. and **Hofreiter, M.** (2006) Tenrec phylogeny and the noninvasive extraction of nuclear DNA. *Systematic Biology*, **55** (2), 181-94.
94. Krause, J., Dear, P. H., Pollack, J. L., Slatkin, M., Spriggs, H., Barnes, I., Lister, A. M., Ebersberger, I., Pääbo, S. and **Hofreiter, M.** (2006) Multiplex amplification of the mammoth mitochondrial genome and the evolution of Elephantidae. *Nature*, **439**, 724-727 (published online 18th December 2005).

2005

95. Rohland, N., Pollack, J. L., Nagel, D., Beauval, C., Airvaux, J., Pääbo, S. and **Hofreiter, M.** (2005) The population history of extant and extinct hyenas. *Mol. Biol. Evol.*, **22** (12), 2435-2443 (published online 24th August 2005).
96. Rabeder, G., **Hofreiter, M.** and Wild, E. M. (2005) Die Bären der Brieglersberghöhle. *Die Höhle*, **56** (1-4), 36-43.
97. Noonan, J. P., **Hofreiter, M.**, Smith, D., Priest, J. R., Rohland, N., Rabeder, G., Krause, J., Detter, J. C., Pääbo, S. and Rubin, E. M. (2005) Genomic sequencing of Pleistocene cave bears. *Science*, **309**, 597-600 (published online 2nd June 2005).
98. Leonard, J. A., Rohland, N., Glabermann, S., Fleischer, R. C., Caccone, G. and **Hofreiter, M.** (2005) A rapid loss of stripes: the evolutionary history of the extinct quagga. *Biology Letters*, **1** (3), 291-295.

Listed under “Research Highlights” in *Nature* **436**, 154-155 (2005).

99. Thalmann, O., Serre, D., **Hofreiter, M.**, Lukas D., Eriksson, J. and Vigilant, L. (2005) Nuclear insertions help and hinder inference of the evolutionary history of gorilla mtDNA. *Molecular Ecology*, **14** (1), 179-188.

2004

100. Matheus, P., Burns, J., Weinstock, J. and **Hofreiter, M.** (2004) Pleistocene brown bears in the mid-continent of North America. *Science*, **306**, 1150.
101. **Hofreiter, M.**, Serre, D., Rohland, N., Rabeder, G., Nagel, D., Conard, N., Münzel, S. and Pääbo, S. (2004) Lack of phylogeography in European mammals before the last glaciation. *Proc. Natl. Acad. Sci. USA*, **101** (35), 12,963-12,968.
102. Serre, D., **Hofreiter, M.** and Pääbo, S. (2004) Mutations induced by ancient DNA extracts? *Mol. Biol. Evol.*, **21** (8), 1463-1467.
103. Rabeder, G. and **Hofreiter, M.** (2004) Der neue Stammbaum der alpinen Höhlenbären. *Die Höhle*, **55** (1-4), 58-77.
104. Rohland, N., Siedel, H. and **Hofreiter, M.** (2004) Nondestructive DNA extraction method for mitochondrial DNA analyses of museum specimens. *Biotechniques*, **36** (5), 814-816, 818-821.
105. Serre, D., Langaney, A., Chech, M., Teschler-Nicola, M., Paunovic, M., Mennecier, P., **Hofreiter, M.**, Possnert, G. and Pääbo, S. (2004) No evidence of Neanderthal mtDNA contribution to early modern humans. *PLoS Biology*, **2** (3), 313-317.
106. **Hofreiter, M.**, Rabeder, G., Jaenicke-Després, V., Withalm, G., Nagel, D., Paunovic, M., Jambrësić, G. and Pääbo, S. (2004) Evidence for reproductive isolation between cave bear populations. *Current Biology*, **14** (1), 40-43.

1998 - 2003

107. **Hofreiter, M.**, Mead, J.I., Martin, P. and Poinar, H.N. (2003) Molecular caving. *Current Biology*, **13** (18), R693-695.

- 108. Hofreiter, M.**, Betancourt, J.L., de Sbriller, A.P., Markgraf, V. and McDonald, H.G. (2003) Phylogeny, diet and habitat of an extinct ground sloth from Cuchillo Curá, Neuquén Province, southwest Argentina. *Quaternary Research*, **59** (3), 364-378.
- 109. Hofreiter, M.**, Siedel, H., van Neer, W. and Vigilant, L. (2003) Mitochondrial DNA sequence from an enigmatic gorilla population (*Gorilla gorilla uellensis*). *Am. J. Phys. Anthrop.*, **121** (4), 361-368.
- 110. Hofreiter, M.**, Capelli, C., Krings, M., Waits, L., Conard, N., Münzel, S., Rabeder, G., Nagel, D., Paunovic, M., Jambrošić, G., Meyer, S., Weiss, G. and Pääbo, S. (2002) Ancient DNA analyses reveal high mitochondrial DNA sequence diversity and parallel morphological evolution of late Pleistocene cave bears. *Mol. Biol. Evol.*, **19** (8), 1244-1250.
- 111. Hofreiter, M.**, Jaenicke, V., Serre, D., v. Haeseler, A. and Pääbo, S. (2001) DNA sequences from multiple amplifications reveal artifacts induced by cytosine deamination in ancient DNA. *Nucleic Acids Res.* **29** (23), 4793-4799.
- 112. Vigilant, L., Hofreiter, M., Siedel, H. and Boesch, C.** (2001) Paternity and relatedness in wild chimpanzee communities. *Proc. Natl. Acad. Sci. USA* **98** (23), 12890-12895.
- 113. Hofreiter, M.**, Poinar, H.N., Spaulding, W.G., Bauer, K., Martin, P.S., Possnert, G. and Pääbo, S. (2000) A molecular analysis of ground sloth diet through the last glaciation. *Molecular Ecology* **9** (12), 1975-1984.
- 114. Poinar, H.N., Hofreiter, M., Spaulding, W.G., Martin, P.S., Stankiewicz, B. A., Bland, H., Evershed, R.P., Possnert, G. and Pääbo, S.** (1998) Molecular coproscopy: dung and diet of the extinct ground sloth *Nothrotheriops shastensis*. *Science* **281**, 402-406.

Peer-reviewed review articles

1. Campbell, K.L. and **Hofreiter, M.** (2015) Resurrecting phenotypes from ancient DNA sequences: promises and perspectives. *Canadian Journal of Zoology*, **93** (9), 701-710 (published online 24th July 2015, doi: 10.1139/cjz-2014-0337).
2. Knapp, M., Lalueza-Fox, C. and **Hofreiter, M.** (2015) Re-inventing ancient human DNA. *Investigative Genetics*, **6**, 4 (doi: 10.1186/s13323-015-0020-4, eCollection 2015).
3. **Hofreiter, M.**, Paijmans, J.L.A., Goodchild, H., Speller, C.F., Barlow, A., Fortes, G.G., Thomas, J.A., Ludwig, A. and Collins, M.J. (2014) The future of ancient DNA: Technical advances and conceptual shifts. *BioEssays*, **37** (3), 284-293 (published online 21st November, doi: 10.1002/bies.201400160).
4. Shapiro, B. and **Hofreiter, M.** (2014) A paleogenomic perspective on evolution and gene function: New insights from ancient DNA. *Science*, **343**, 1236573-1-7.
5. Gonzales-Fortes, G., Speller, C.F., **Hofreiter, M.** and King, T.E. (2013) Predicting phenotypes from genotypes: new challenges in ancient DNA studies. *BioEssays*, **35** (8), 690-695 (published online 10th June 2013; doi: 10.1002/bies.201300036).
6. Paijmans, J.L., Gilbert, M.T. and **Hofreiter, M.** (2012) Mitogenomic analyses from ancient DNA. *Molecular Phylogenetics and Evolution*, **69** (2), 404-16. (published online 15th June 2012; doi: 10.1016/j.ympev.2012.06.002).
7. Pinhasi, R. Thomas, M.G., **Hofreiter, M.**, Currat, M. and Burger, J. (2012) The genetic history of Europeans. *Trends in Genetics*, **28** (10), 496-505 (published online 9th August 2012; doi: org/10.1016/j.tig.2012.06.006).
8. **Hofreiter, M.**, Collins, M. and Stewart, J. (2012) Ancient biomolecules in Quaternary palaeoecology. *Quaternary Science Reviews*, **33**, 1-13 (published online 13th January 2012).
9. Foote, A., **Hofreiter, M.** and Morin, P. (2011) Ancient DNA from marine mammals: studying long-lived species over ecological and evolutionary

timescales. *Annals of Anatomy*, **194** (1), 112-120 (published online 13th May 2011).

10. De Bruyn, M., Hoelzel, A. R., Carvalho, G. R., and **Hofreiter, M.** (2011) Faunal histories from ancient DNA. *Trends in Ecology and Evolution*, **26** (8), 405-413 (published online 27th April 2011, doi:10.1016/j.tree.2011.03.021).
11. Cieslak, M., Reissmann, M., **Hofreiter, M.** and Ludwig A. (2011) Colours of domestication, *Biological Reviews*, **86** (4), 885-99 (published online 28th March 2011; doi: 10.1111/j.1469-185X.2011.00177.x).
12. Knapp, M. and **Hofreiter, M.** (2010) Next generation sequencing of ancient DNA: Requirements, strategies and perspectives. *Genes*, **1**, 227-243 (doi:10.3390/genes1020227).
13. Knapp, M., Finstermeier, K., Horn, S. Stiller, M. and **Hofreiter, M.** (2010) PCR und andere Anreicherungsverfahren: neue Technologien für alte DNA. *Biospektrum*, **16** (5), 531-535.
14. **Hofreiter, M.** and Stewart, J. (2009) Ecological change, range fluctuations and population dynamics during the Pleistocene. *Current Biology*, **19** (14), R584-94.
15. **Hofreiter, M.** (2009) Spurensuche in alter DNA. *Biologie in unserer Zeit* **39** (3), 176-184.
16. **Hofreiter, M.** (2008) Long DNA sequences and large data sets: investigating the Quaternary via ancient DNA. *Quaternary Science Reviews* **27** (27-28), 2586-2592.
17. **Hofreiter, M.** (2008) Palaeogenomics. *Série Palévol des Comptes Rendus de l'Académie des Sciences* (invited review), **7**, 113-124 (published online 4th March 2008).
18. Römpler, H., Stäubert, C., Thor, D., Schulz, A., **Hofreiter, M.** and Schöneberg, T. (2007) G protein-coupled time travel: evolutionary aspects of GPCR research. *Molecular Interventions*, **7** (1), 17-25.
19. Schöneberg, T., **Hofreiter, M.**, Schulz, A. and Römpler, H. (2007) Learning from the past: evolution of GPCR functions. *Trends in Pharmaceutical Sciences*, **28** (3), 117-21.

20. Gilbert, M.T.P., Bandelt, H.-J., **Hofreiter, M.** and Barnes, I. (2005) Assessing ancient DNA studies. *Trends in Ecology and Evolution*, **20** (10), 541-544 (published online 21st July 2005).
21. Pääbo, S., Poinar, H., Serre, D., Jaenicke-Després, V., Hebler, J., Rohland, N., Kuch, M., Krause, J., Vigilant, L. and **Hofreiter, M.** (2004) Genetic analyses from ancient DNA. *Annual Reviews of Genetics*, **38**, 645-679.
22. **Hofreiter, M.**, Serre, D., Poinar, H.N., Kuch, M. and Pääbo, S. (2001) Ancient DNA. *Nature Reviews Genetics* **2** (5), 353-359.

Editorial material and non-peer-reviewed papers

2013-2015

1. Xiang, H., Gao, J., Yu, B., **Hofreiter, M.** and Zhao, X. (2015) Reply to Peters et al.: Further discussions confirm early Holocene chicken domestication in northern China. *Proc. Natl. Acad. Sci. U S A*, **112 (19)**, E2416 (published online 17th April 2015; doi: 10.1073/pnas.1503956112).
2. Germonpré, M., Sablin, M.V., Láznicková-Galetová, M., Després, V., Stevens, R.E., Stiller, M., and **Hofreiter, M.** (2015) Palaeolithic dogs and Pleistocene wolves revisited: a reply to Morey (2014). *Journal of Archaeological Science*, **54**, 210-216 (DOI:10.1016/j.jas.2014.11.035).
3. Xiang, H., **Hofreiter, M.** and Zhao, X. (2015) Reply to Peng et al.: Archaeological contexts should not be ignored for early chicken domestication. *Proc. Natl. Acad. Sci. U S A*, **112 (16)**, E1972–E1973 (20th March 2015; doi: 10.1073/pnas.1502207112).
4. Hagedorn, E., **Hofreiter M.** and Keyser, C. (2015) Ancient DNA: the first three decades. *Phil Trans R Soc B*, **370 (1660)**, 20130371 (doi: 10.1098/rstb.2013.0371).
5. **Hofreiter, M.** (2013) Genetic basis and evolutionary causes of colour variation in vertebrates – Special issue editorial. *Seminars in Cell and Developmental Biology*, **24 (6-7)**, 515 (published online 15th May 2013; doi: 10.1016/j.semcdb.2013.05.009).

2012

6. Germonpré, M., Sablin, M.V., Després, V., **Hofreiter, M.**, Láznicková-Galetová, M., Stevens, R.E. and Mathias Stiller, M. (2012) Palaeolithic dogs and the early domestication of the wolf: a reply to the comments of Crockford and Kuzmin. *Journal of Archaeological Science*, **40**, 786-792 (published online 17th August 2012; doi: 10.1016/j.jas.2012.06.016).
7. Campbell, K. and **Hofreiter, M.** (2011) New life for ancient DNA. *Scientific American*, **307 (2)**, 46-51.

8. Ludwig, A., Pruvost, M, Bellone, R, Benecke, N., Sandoval-Castellanos, E., Morales-Muñiz, A., O'Connor, T., Reissmann, M. and **Hofreiter, M.** (2012) Reply to Bar-Oz and Lev-Yadun: Horse colors in time and space. *Proc. Natl. Acad. Sci. U S A*, **109** (20), E1213 (published online, 16th April 2012, doi:10.1073/pnas.1203187109).

2011

9. **Hofreiter, M.** (2011) Editorial Special Issue: Ancient DNA. *Annals of Anatomy*, **194** (1), 1-2 (published online 13th May 2011).
10. **Hofreiter, M.** (2011) Drafting human ancestry: what does the Neanderthal genome tell us about hominid evolution? *Human Biology*, **83** (1), 1-11.
11. Rabeder G., **Hofreiter M.** and Stiller M. (2011) „Chronological and Systematic Position of Cave Bear Fauna from Ajdovska jama near Krsko (Slovenia).“ *Mitt. Komm. Quartärforsch. Österr. Akad. Wiss. Wien* **20**, 79-86 (107 pages, ISBN 978-3-7001-7149-2).

2010

12. Shapiro, B. and **Hofreiter, M.** (2010) Analysis of ancient human genomes. *BioEssays*, **32**, 388-391.
13. **Hofreiter, M.** and Barnes, I. (2010) Diversity lost: are all Holarctic large mammal species just relict populations? *Journal of Biology*, **8**, 46.
14. **Hofreiter, M.** and Schöneberg, T. (2010) The genetic and evolutionary basis of colour variation in vertebrates. *Cellular and Molecular Life Sciences*, **67** (15), 2591-603 (published online 14th March 2010).

2008-2009

15. Gilbert, M.T.P., Jenkins, D.L., Higham, T.F.G., Rasmussen, M., Malmström, H., Svensson, E.M., Sanchez, J.J., Cummings, L.S., Robert M. Yohe, R.M. II,

Hofreiter, M., Götherström, A. and Willerslev, E. (2009) Response to comment by Poinar et al. on "DNA from pre-clovis human coprolites in Oregon, North America". *Science*, **325**, 148-b.

16. **Hofreiter M.** (2009) Gene data for endangered species have limitations. *Nature* **459 (7248)**, 774.
17. **Hofreiter, M.** (2008) Mammoth genomics. *Nature* (News & Views, invited) **456**, 330-31 (DOI: 10.1038/456330a).
18. Münzel S.C., **Hofreiter M.**, Stiller M., Conard N.J., Bocherens H. (2008) „Neue Ergebnisse zur Paläobiologie der Höhlenbären auf der Schwäbischen Alb (Chronologie, Isotopie und Paläogenetik).“ *Stalactite*, **58 (2)**, 27-30.

2006-2007

19. **Hofreiter, M.** (2007) Pleistocene extinctions: haunting the survivors. *Current Biology* (invited Dispatch), **17 (15)**, R609-11.
20. Bocherens, H., Conard, N.J., Germonpré, M., **Hofreiter, M.**, Münzel, S.C., Stephan, E., Tütken, T. (2007) Isotopic biogeochemistry and the evolution of cave bear ecology during Marine Oxygen Isotopic Stage 3 in Western and Central Europe. *Scripta Fac. Sci. Nat. Univ. Masaryk. Brun* 35: 103-106.
21. Münzel, S.C., **Hofreiter, M.**, Rabeder, G.; Bocherens, H.; Uerpmann, H.-P. & N. J. Conard (2007) Correlating genetic results for the replacement of cave bears at 28.000 B.P. from the Ach Valley (Swabian Jura) with metrical and morphological data. In: Musil, R. & V. Vávra (eds), Proceedings of the 13th International Cave Bear Symposium 2007 in Brno, Czech Republic, *scripta Geology* Vol. 35: 123-128.
22. **Hofreiter, M.** and Lister, A. M. (2006) Mammoths (quick guide, invited). *Current Biology*, **16 (10)**, R347-8.

2005

23. **Hofreiter, M.** (2005) Ancient DNA typing, book review. *Homo – Journal of comparative human biology*, **55 (3)**, 298-300.

24. **Hofreiter, M.** (2005) Evolutionsgeschichte alpiner Höhlenbären aus molekulargenetischer Sicht. *Mitt. Komm. Quartärforsch. Österr. Akad. Wiss. Wien* **14**, 67-72.
25. Nagel, D., Pronin, K., Rabeder, G., **Hofreiter, M.**, Huijjer, W., Kavcik, N., Urbanek, C., Withalm, G. and Orlov, N. (2005) Nerubajskoe, a new cave bear site in the old Nordmann territory. *Mitt. Komm. Quartärforsch. Österr. Akad. Wiss. Wien* **14**, 123-134.

2004

26. **Hofreiter, M.**, Loreille, O., Ferriola, D. and Parsons, T.J. (2004) Ongoing controversy over Romanov remains. *Science*, **306**, 407-10.
27. **Hofreiter, M.** and Pacher, M. (2004) Using ancient DNA to elucidate raw material origin of bone points from Potočka Zijalka (Slovenia): preliminary results. *Mitt. Komm. Quartärforsch. Österr. Akad. Wiss.* **13**, 201-210.
28. Rabeder, G., **Hofreiter, M.**, Pacher, M. and Withalm, G. (2004) The systematic position of the cave bear from Potočka Zijalka. *Mitt. Komm. Quartärforsch. Österr. Akad. Wiss.* **13**, 197-200.
29. Rabeder, G., **Hofreiter, M.**, Nagel, D., and Withalm, G. (2004) New Taxa of Alpine Cave Bears (Ursidae, Carnivora). *Docum. Labor. Géol. Lyon*, Hors série no 2, 49-68.

2. Book chapters

2014-2015

1. Stiller, M., Münzel, S. and **Hofreiter, M.** (2015) Genetic analyses of the Ach valley cave bear remains. In *Geißenklösterle - Chronostratigraphie, Paläoumwelt und Subsistenz im Mittel- und Jungpaläolithikum der Schwäbischen Alb*. Editors N.J. Conard, M. Bolus and S.C. Münzel, Tübinger Monographien zur Urgeschichte, Kerns Verlag Tübingen, **in press**.
2. Knapp, M. and **Hofreiter, M.** (2014) Ancient Human DNA: Phylogenetic Applications. In: *ENCYCLOPEDIA OF LIFE SCIENCES*. John Wiley & Sons, Ltd: Chichester UK.
<http://www.els.net/> [DOI:10.1002/9780470015902.a0005143.pub3].
3. **Hofreiter, M.** (2014) Ancient DNA. In *Oxford Bibliographies in Evolutionary Biology*. Editor J. Losos, Oxford University Press, New York, **published online 13th January 2014** (DOI: 10.1093/OBO/9780199941728-0036).
4. Jenkins, D.L., Davis, L.G., Stafford, T.W. Jr., Connolly, T.J., Cummings, L.S., **Hofreiter, M.**, Hockett, B., Jones, G.T., Gibbons, S.C., Raghavan, M., Rasmussen, M., McDonough, K., Luthé, I., O'Grady, P.W., Swisher, M.E., White, F., Yohe, R.M. II, Yost, C. and Eske Willerslev, E. (2014) Geochronology, Archaeological Context, and DNA at the Paisley Caves. In *The Paleoamerican Odyssey*. Editors K.E. Graf, T. Goebel, and M.R. Waters, Center for the Study of First Americans, College Station, Texas.

2012

5. Shapiro, B. and **Hofreiter, M.** (2012) Preface to *Ancient DNA: methods and protocols*. Editors B. Shapiro and M. Hofreiter, *Methods in Molecular Biology* 840, Humana Press, Springer.
6. **Hofreiter, M.** (2012) Non-destructive DNA extraction from museum specimens. Pages 93-100 In *Ancient DNA: methods and protocols*. Editors B. Shapiro and M. Hofreiter, *Methods in Molecular Biology*, 840, Humana Press, Springer.

7. Mohandesan, E., Prost, S. and **Hofreiter, M.** (2012) Case Study: Using a non-destructive DNA Extraction method to generate mtDNA sequences from historical Chimpanzee specimens. Pages 101-110 In *Ancient DNA: methods and protocols*. Editors B. Shapiro and M. Hofreiter, *Methods in Molecular Biology*, 840, Humana Press, Springer.
8. Stiller, M. and **Hofreiter, M.** (2012) An ancient DNA perspective on the cave bears from Peștera cu Oase, Romania. Pages 159-164 In *Life and Death at the Peștera cu Oase: A Setting for Modern Human Emergence in Europe*. Editors E. Trinkaus, S. Constantin and J. Zilhao, 435 pages, Oxford University Press, New York, ISBN 978-0-19-539822-9.

2009-2011

9. **Hofreiter, M.** and Römpler, H. (2010) Polymerase chain reaction: A blessing and a curse for ancient deoxyribonucleic acid research. Pages 284-299 in *The PCR Revolution: Basic technologies and applications*. Editor S. A. Bustin, 344 pages, Cambridge University Press, ISBN 978-0-521-88231-6.
10. **Hofreiter, M.** (2010) Human Evolution. Pages 529-55 in *Vogel and Motulsky's Human Genetics. Problems and Approaches*, 4th edition. Editors M. R. Speicher, S. E. Antonarakis and A. G. Motulsky, 981 pages, Springer Verlag, Heidelberg, ISBN 978-3-540-37653-8.
11. **Hofreiter, M.** (2009) Gene der Vergangenheit – DNS-Analysen. Page 51 in *Eiszeit – Kunst und Kultur*. Editors Archaeological State Museum Baden-Wuerttemberg and Department of Early Prehistory and Quaternary Ecology, University of Tuebingen, 396 pages, Jan Thorbecke-Verlag, Osterfildern, ISBN 978-3-7995-0833-9.

2004-2008

12. Knapp, M., Vigilant, L. and **Hofreiter, M.** (2008) Ancient DNA: Phylogenetic Applications. In: *ENCYCLOPEDIA OF LIFE SCIENCES*. John Wiley & Sons, Ltd: Chichester UK.
<http://www.els.net/> [DOI:10.1002/9780470015902.a0005143.pub2].

13. Serre, D., Langaney, A., Chech, M., Teschler-Nicola, M., Paunovic, M., Menecier, P., **Hofreiter, M.**, Possnert, G. and Pääbo, S. (2006) No Evidence of Neanderthal mtDNA Contribution to Early Modern Humans. Pages 491-504 in *Early Modern Humans and the Moravian Gate*. Editor M. Teschler-Nicola, 528 pages, Springer Verlag, Vienna, ISBN 10 3-211-2358-4.
14. **Hofreiter, M.** (2006) Die Analyse alter DNA. Pages 175-182 in *Roots – Wurzeln der Menschheit*. Editor G. Uelsberg, Rheinisches Landesmuseum Bonn, 360 pages, Verlag Philipp von Zabern Mainz, Germany, ISBN 10-3-8053-3602-0.

1999-2003

15. **Hofreiter, M.** and Vigilant, L. (2003) Ancient DNA: phylogenetic applications. Pages 116-119 in *Encyclopedia of the human genome*. Editor D.N. Cooper, Vol. 1. Nature publishing group, ISBN 0-333-80386-8.
16. Rabeder, G., **Hofreiter, M.**, Nagel, D., Pääbo, S. and Withalm, G. (2002) Die neue Taxonomy der Höhlenbären, in *Cave bear researches, Abhandlungen zur Karst- und Höhlenkunde, Heft 34*. Editors W. Rosendahl, M. Morgan and M.L. Correa, ISSN 0567-4956.
17. **Hofreiter, M.** (2002) Genetic stability and replacement in late Pleistocene cave bear populations, in *Cave bear researches, Abhandlungen zur Karst- und Höhlenkunde, Heft 34*. Editors W. Rosendahl, M. Morgan and M. L. Correa, ISSN 0567-4956.
18. **Hofreiter, M.** (2001) Analyse alter DNA, in *Höhlenbärspuren, Museumsheft 5, Urgeschichtliches Museum Blaubeuren*. Editors S. Kölbl and N.J. Conard, ISSN 1617-2655.
19. **Hofreiter, M.** (1999) Möglichkeiten und Grenzen der Analyse archäologischer DNA, in *Beiträge zur Archäozoologie und Prähistorischen Anthropologie, Band II*. Editors M. Kokabi and E. May, Verlagsbüro Wais and Partner, Stuttgart. ISBN 3-00-005022-1.

3. Edited volumes

1. Special issue on “30 years of ancient DNA”, *Philosophical Transactions of the Royal Society B* (2015), **M. Hofreiter**, guest editor (together with Prof. E. Hagelberg and Prof. C. Keyser).
2. Special issue on "Genetic basis and evolutionary causes of colour variation in vertebrates", *Seminars in Cell and Developmental Biology* (2013), **M. Hofreiter**, guest editor.
3. Special issue on “Ancient DNA”, *Annals of Anatomy* (2011), **M. Hofreiter**, guest editor.

4. Books

1. Shapiro, B. and **Hofreiter, M.** (eds). Ancient DNA: methods and protocols (2012). *Methods in Molecular Biology*, Humana Press, Springer.