

Supplementary Information

Large-Scale Migration into Britain During the Middle to Late Bronze Age

Supplementary Information Guide

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SI Section 1: Archaeological context

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AUSTRIA

Pottenbrunn, St. Pölten municipal area, Lower Austria, Austria

The cemetery is located in the south-west of Pottenbrunn, on plot “Steinfeld” (15°41’05”/48°13’55”). Discovered in 1930, it had already yielded objects dating to the early La Tène period. In 1981, road construction revealed further finds which initiated rescue excavations by the Bundesdenkmalamt (State Office for Protection of Historical Monuments) under the guidance of J.-W. Neugebauer (Ramsl 2002a, 13) in 1981 and 1982. A total of 42 graves with 45 burials (single and double inhumations, and cremations) have been documented. Some burials were severely disturbed (by ancient activities such as grave robbing and/or contemporary construction work), and some were set within fenced enclosures (“Grabgärten”). Three (of 22) samples of charcoal and bone fragments taken by Peter Stadler (Department of Prehistory, Natural History Museum Vienna) in the course of the FWF-project “Absolute Chronology for Early Civilisations in Austria and Central Europe” returned AMS dates of 410–200 cal BCE (grave 520), 550–200 cal BCE (grave 565) and 380–350 cal BCE (grave 1005) (Ramsl 2002b, 359).

The cremation burials were not included in the initial osteological analysis, but 31 inhumed individuals were studied (Gerold 2002). Petrous bones from three of these were successfully analysed for aDNA. Sample I11699 (female) derived from an individual (inv. no. 26.238) aged c. 20 years in grave 89 which, despite disturbance in antiquity, was accompanied by fibulae and ceramic vessels.

Sample I11701 (male) derived from an individual (inv. no. 26.249) aged c. 18 years in grave 570, which also included shears, fibulae, and ceramic vessels. Evidence for bone porosity in the mandible and maxilla suggest possible Vitamin C deficiency, while enamel hypoplasia points to malnutrition or illness during childhood.

Sample I11708 (female) derived from an individual (inv. no. 26.250) aged c. 25–35 years in grave 574/2, who was richly adorned with fibulae, bronze, iron and silver-rings, an amber ring, a bracelet, a glass bead, and a worked bone artefact.

Source of samples: Maria Teschler-Nicola (samples taken by Ron Pinhasi), Department of Anthropology, Natural History Museum Vienna

Author of entry: Maria Teschler-Nicola

References:

Gerold, F. 2002. Anthropologische Auswertung der latènezeitlichen Skelettreste des Gräberfeldes Pottenbrunn (Niederösterreich) unter besonderer Berücksichtigung der krankhaften und degenerativen Veränderungen, in P.C. Ramsl, *Das eisenzeitliche Gräberfeld von Pottenbrunn. Forschungsansätze zu wirtschaftlichen Grundlagen und sozialen Strukturen der latènezeitlichen Bevölkerung des Traisentales, Niederösterreich. Fundberichte aus Österreich, Materialheft A 11*, 303–31. Vienna: Berger.

Ramsl, P.C. 2002a. *Das eisenzeitliche Gräberfeld von Pottenbrunn. Forschungsansätze zu wirtschaftlichen Grundlagen und sozialen Strukturen der latènezeitlichen Bevölkerung des Traisentales, Niederösterreich. Fundberichte aus Österreich, Materialheft A 11*, 11–248. Vienna: Berger.

Ramsl, P.C. 2002b. Die Radiocarbonaten aus dem Gräberfeld von Pottenbrunn, in P.C. Ramsl, *Das eisenzeitliche Gräberfeld von Pottenbrunn. Forschungsansätze zu wirtschaftlichen Grundlagen und sozialen Strukturen der latènezeitlichen Bevölkerung des Traisentalles, Niederösterreich. Fundberichte aus Österreich, Materialheft A 11*, 359–61. Vienna: Berger.

CHANNEL ISLANDS

The Common, Herm, Channel Islands

A number of megalithic sites on the Common at the north end of the island of Herm were investigated by the Lukis family in the mid-nineteenth century (Kendrick 1928, 198–221). More recently Professor Chris Scarre carried out four seasons of fieldwork on the Common, combining excavation with a programme of coring, soil sampling, micromorphology, palynology and OSL dating (Scarre and French 2013). His work suggests that the oldest of the tombs date to the fifth or early fourth millennium BCE, contemporary with similar monuments in Brittany and Normandy (Scarre and French 2013, 14). Evidence for settlement and agricultural practices was spread widely across the Common, in some cases very close to the megalithic monuments, and there were indications of attempts to improve the quality of the soil by manuring with midden-derived material persisting from the fourth to the late second millennium BCE (Scarre and French 2013, 10).

A tooth (GMAG 3167a) from a mandible recovered during Lukis's excavation of the 'new cromlech at foot of Petit Monceau' in 1841 yielded sample I16435 (male); this is Kendrick's tomb no. 12 (1928, 208–10), better known now as Robert's Cross (Scarre and French 2013, 12–13). Scarre (pers. comm.) obtained a radiocarbon date of 4817 ± 28 BP (MAMS-14945; 3646–3527 cal BCE) for the mandible from which this tooth was extracted. The sample has been excluded from the analysis due to low data coverage.

DNA was also successfully extracted and analysed from a tooth (GMAG 3171d) from a mandible excavated by Lukis on Le Grand Monceau in 1840, which yielded sample I16436 (male). This appears to be Kendrick's tomb no. 6 (1928, 205–6). The mandible from which this tooth originated was radiocarbon dated to 5050 ± 29 BP (MAMS-14949; 3954–3773 cal BCE; Scarre pers. comm.). The sample has been excluded from the analysis due to low data coverage.

Source of sample: Phil de Jersey, Guernsey Museum

Author of entry: Phil de Jersey

References:

Kendrick, T.D. 1928. *The archaeology of the Channel Islands. Volume I: The Bailiwick of Guernsey*. London: Methuen & Co.

Scarre, C. and French, C. 2013. The palaeogeography and Neolithic archaeology of Herm in the Channel Islands. *Journal of Field Archaeology* 38, 4–20.

Le Déhus, Vale, Guernsey, Channel Islands

The passage grave of Le Déhus was first excavated by Frederick Corbin Lukis, and other members of his family, between 1837 and 1847. Lukis left a reasonably detailed account of his investigations and upwards of two hundred pieces of human bone from his work are preserved in Guernsey Museum (Schulting et al. 2010, 149–58). Five pieces of bone, all of adults, from the Lukis excavations were radiocarbon dated for the programme described by Schulting et al. (2010, 160). Three mandibles from chambers C and D (and a tooth, sampled to confirm the date for mandible sample 98) relate to the primary use of the tomb, in the late fifth millennium BCE. A cranium from chamber B is from one of two skeletons which were reportedly found in

a kneeling position, and is clearly later, falling within the Late Neolithic. Pottery from the tomb also indicates that it was still in use at this time.

Palaeogenetic samples included in this study come from six teeth, whose associated AMS dates (when coupled with the data from Schulting et al. 2010) indicate five different episodes of use/re-use of the tomb.

First are the samples which align well with Schulting et al's (2010) Middle Neolithic dates: sample I16437 (101; female), dating to 5336 ± 24 BP (SUERC-96213) and 5263 ± 38 BP (OxA-12542), which appears to have come from an adjoining fragment of mandible (106) included in Schulting et al's (2010) study: these have a weighted average of 5315 ± 21 BP (4241–4050 cal BCE); sample I16427 (119; male), dating to 5328 ± 23 BP (SUERC-96214; 4310–4051 cal BCE); and sample I16444 (97; male), dating to 5304 ± 24 BP (SUERC-96212; 4239–4047 cal BCE).

Next, are two Late Neolithic samples: I16429 (63; male), dating to 4381 ± 23 BP (SUERC-96206; 3088–2914 cal BCE); and I16425 (65; female), dating to 4373 ± 23 BP (SUERC-96207; 3083–2912 cal BCE). Another, slightly later, Late Neolithic 'seated' burial was dated by Schulting et al. 2010.

A further tooth reported here yielded sample I16438 (61; male), dating to 3987 ± 23 BP (SUERC-96208; 2571–2464 cal BCE). This accords well with the presence of Beaker pottery and a tanged copper dagger in the tomb (Schulting et al. 2010: 153). It should be noted however that this individual has no trace of steppe ancestry, and may therefore equally be associated with Late Neolithic activity in the tomb.

Source of sample: Phil de Jersey, Guernsey Museum

Author of entry: Phil de Jersey

Reference: Schulting, R., Sebire, H., and Robb, J. 2010. On the road to Paradis: new insights from AMS dates and stable isotopes at Le Déhus, Guernsey, and the Channel Islands Middle Neolithic. *Oxford Journal of Archaeology* 29, 149–73.

Longis Common, Alderney, Channel Islands

In June 2017 contractors digging an electricity cable trench along the Rue des Mielles, on the south-west side of Longis Common, Alderney, began to uncover quantities of human bone. A team of archaeologists from Guernsey Museum cleaned up the trench and identified numerous features in situ, including several stone cists, a cremation burial and an inhumation (Monaghan and de Jersey 2017–18). The inhumation (context LON17/86) was radiocarbon dated to 2070 ± 30 BP (Beta-476135; 174–19 cal BCE) and the cremation (context LON17/98) to 2100 ± 30 BP (Beta-476136; 198–47 cal BCE).

Palaeogenetic data from two other burials found in the cable trench are included here. A petrous portion of a temporal bone in a partial cranium removed from a damaged stone cist (LON17/83, Skull 1) yielded sample I16430 (female), dating to 2118 ± 24 BP (SUERC-96204; 337–52 cal BCE); and a first metatarsal from another inhumation (LON17/60) yielded sample I16505 (female), dating to 2097 ± 23 BP (SUERC-96202; 174–45 cal BCE).

Excavation in the field adjacent to the cable trench took place in 2018 and 2019, and confirmed the presence of a substantial Iron Age cemetery, overlain by Gallo-Roman settlement dating from the early second century to the late fourth century CE (de Jersey 2018–19; 2019–

20). Teeth from three excavated Iron Age burials were successfully analysed for aDNA. The first, an adult in a stone-lined cist (LON19/272), provided sample I26629 (female), dating to 2098±29 BP (SUERC-96765; 170 cal BCE–cal CE 90; marine corrected). Immediately adjacent to the stone-lined cist were two further burials, one on top of the other. The upper skeleton, an adult (LON19/270) provided sample I26628 (female), dating to 2457±29 BP (SUERC-96764; 750–380 cal BCE; marine corrected). The lower skeleton, a juvenile (LON19/276), provided sample I26630 (male), dating to 2425±29 BP (SUERC-96766; 749–403 cal BCE).

Source of sample: Phil de Jersey, Guernsey Museum

Author of entry: Phil de Jersey

References:

de Jersey, P. 2018–19. Excavations in Paddock by Coastguards, Longis. *Alderney Society Bulletin* 53: 69–83.

de Jersey, P. 2019–20. Excavations in the Paddock Field, Longis, 2019. *Alderney Society Bulletin* 54: 87–104.

Monaghan, J., and de Jersey, P, 2017–18. Discoveries from the Longis cable trench. *Alderney Society Bulletin* 52: 78–81.

CROATIA

Bezdanjača Cave, Croatia

Bezdanjača Cave is located on the Vatinovac hill, near Vrhovine, in the Lika region of Croatia. The cave was first recognized as a prehistoric site in 1964 and the archaeological excavations began in 1965. In total, 1176m of the cave system has been explored, of which only the first 190m are of archaeological interest. The difference in height between the highest and the lowest point of the cave is around 200m. The entrance to the cave is located at 740m above sea level, and measures 31m tall. At its base, the entrance bifurcates into two main branches, namely the western channel and the eastern channel. The cave is naturally hidden and difficult to access, which suggests that it has lain undisturbed since the cessation of its use by prehistoric communities (Malez 1979/1980).

Just over 70m from the entrance of the eastern channel, archaeologists excavated the greatest number of archaeological deposits, which revealed the presence of several rather well-preserved human skeletons. Architectural remains included numerous drystone walls and wooden structures that could have elaborated the entrance to the cave or formed platforms functioning as working surfaces or beds. Traces of hearths, pottery and bronze artefacts, as well as bracken and hay, were found both on the stone structures and on the floor of the channel, and were used in some cases to assess the chronology of the site (Drechsler-Bižić 1979/1980; Malez 1979/1980; Malinar 1998).

Two cultural horizons can be distinguished at Bezdanjača: an older one, dating to the Middle Bronze Age (BrC/D, 1500–1200 BCE), and a more recent one, dating to the Late Bronze Age (BrD/HaA, 1200–1000 BCE) (Drechsler-Bižić 1979/1980; Benac1993/1994). Radiocarbon analysis of several wood samples from the site yielded dates of 1350–1100 BCE (Sliepčević and Srdoč 1979/1980). Recent radiocarbon dates for two individuals from Bezdanjača align with the previous radiocarbon dates from the same site.

A petrous bone from one of the individuals (BzV 10a) excavated from the eastern channel yielded sample I18719 (male). This mature adult displayed possible peri-mortem trauma. Unfortunately, only the left side of the cranium is preserved.

Source of sample: Siniša Radović, Institute for Quaternary Palaeontology and Geology, Croatian Academy of Sciences and Arts, Zagreb

Authors of entry: Siniša Radović, Institute for Quaternary Palaeontology and Geology, Croatian Academy of Sciences and Arts, Zagreb and Mario Novak, Centre for Applied Bioanthropology, Institute for Anthropological Research, Zagreb

References:

Benac, A. 1993/1994. Napomene uz problematiku prahistorijske nekropole u Bezdanjači. *Vjesnik Arheološkog muzeja u Zagrebu* 26/27: 21–3.

Drechsler-Bižić, R. 1979/1980. Nekropola brončanog doba u pećini Bezdanjači kod Vrhovina. *Vjesnik Arheološkog muzeja u Zagrebu* 12/13: 27–32.

Malez, M. 1979/1980. Pećina Bezdanjača kod Vrhovina i njezina kvartarna fauna. *Vjesnik Arheološkog muzeja u Zagrebu* 12/13: 1–26.

Malinar, M. 1998. Brončanodobni lokalitet špilja Bezdanjača: novi material i interpretacija. *Opuscula Archaeologica* 22: 141–62.

Sliepčević, A. and Srdoč, D. 1979/1980. Određivanje starosti uzoraka drveta i sige iz spilje Bezdanjače. *Vjesnik Arheološkog muzeja u Zagrebu* 12/13: 79–85.

Gornja Vrba–Savsko polje, Croatia

The archaeological site of Gornja Vrba–Savsko polje is located on the northern bank of the Sava River, about 2km east of the center of Slavonski Brod. During several campaigns of archaeological excavations conducted from 2015 to 2017, about 80,000 square metres were explored, with remains dating from the Middle Neolithic to the Late Medieval period. Most of the archaeological deposits represent the remains of a Middle Neolithic settlement, preliminary attributed to the Sopot culture (5450–4900 BCE), but this has not yet been confirmed through AMS dating. Furthermore, excavations revealed the existence of rectangular and trapezoidal structures, aligned north–south. These comprised evenly distributed post-pits, outer walls in the form of narrow channels containing preserved postholes and elongated side pits flanking the structures on their western and eastern sides. The dimensions of these structures (likely houses) varied from 10–18m in length and 6–9m wide (Bodružić 2016). Structures of identical spatial distribution, size and assumed appearance formed the basis of the LBK settlements in the Transdanubian area, and so this site is particularly interesting in the context of further study of LBK influence on the formation of Middle Neolithic cultural complexes in the area bounded by Sava and Drava rivers (Botic 2020).

A total of 9 Neolithic burials were found during excavations at the site. All graves were located within the Neolithic settlement, as part of stratigraphic units such as side pits flanking the houses or in pits that (in the absence of human remains) would be interpreted exclusively as waste pits (Bodružić 2016).

A petrous bone from an adult in Grave 3, in the eastern part of the investigated area of the settlement, yielded sample I26738 (female). This very fragmented and partially preserved skeleton was represented only by the cranium, upper torso and upper extremities. Mild healed

porotic hyperostosis is present on the occipital bone fragments. According to the position of the skull and bones of the torso, the deceased was probably laid face down, with their arms bent along their chest. There were no accompanying grave goods (Bodružić 2016).

Source of sample: Mario Bodružić, Stratum Ltd., Seget Donji

Authors of entry: Mario Bodružić, Stratum Ltd., Seget Donji and Mario Novak, Centre for Applied Bioanthropology, Institute for Anthropological Research, Zagreb

References:

Bodružić, M. 2016. Gornja Vrba-Savsko Polje. *Hrvatski arheološki godišnjak* 12/2015: 129–33.

Botić, K. 2020. Middle Neolithic transformation: Starčevo–LBK–Vinča meeting point and the emergence of Ražište style in Drava river valley. *Quaternary International* 560: 197–207.

Gudnja Cave, Croatia

Gudnja Cave is located on the peninsula of Pelješac, near Ston, at an altitude of 400m above sea level. The cave measures about 33m x 20m. It consists of one large chamber, with a south-facing entrance measuring c. 15m wide and up to 5m high (Perkić and Novak 2020).

The cave was discovered by Vladimir Miroslavljević and systematic archaeological research was carried out in 1963–8 under the leadership of Spomenka Petrak, curator of the Dubrovnik Museums. The investigations were extensive (150m² were explored), with methodological excavation techniques which were advanced for the time. Unfortunately, however, the research remains unpublished. A smaller revised research project was conducted in 2004 by Brunislav Marijanović from the Department of Archaeology at the Faculty of Philosophy in Zadar (in which 11.5m² was investigated) (Perkić and Novak 2020).

Gudnja Cave is certainly one of the most famous prehistoric archaeological sites on the eastern Adriatic coast. It is essential for the study of any prehistoric period, since it was used over longer periods and for shorter episodes, and as an occasional dwelling, between 6100 and 1500 BCE, and more sporadically in the third and second centuries BCE (Perkić and Novak 2020).

The explorations of 1963–8 found a neonate burial opposite the entrance, in the northern part of the cave (in quadrant D II), at a depth of 10–20cm from the surface (i.e. within the first excavation layers). The individual, who was aged 3–4 weeks, was very well preserved and the grave contained a large number of animal bones and shells. Radiocarbon analysis of this individual places the burial in the Middle Bronze Age, with a date of 3190±30 BP (Beta-423457; 1507–1415 cal BCE; Perkić and Novak 2020). A petrous bone from this individual (G1) yielded sample I26726 (male). Osteological analysis suggested that there may have been up to three individuals in this burial, but an additional petrous bone from the same grave proved to be a genetic duplicate of I26726 and has not therefore been included in the analysis.

Source of sample: Domagoj Perkić, Archaeological Museum, Dubrovnik Museums, Dubrovnik
Author of entry: Domagoj Perkić, Archaeological Museum, Dubrovnik Museums, Dubrovnik and Mario Novak, Centre for Applied Bioanthropology, Institute for Anthropological Research, Zagreb

Reference:

Perkić, D. and Novak, M. 2020. Tragovi prapovijesnih pokapanja ljudi u špiljama dubrovačkoga područja. *Prilozi Instituta za arheologiju u Zagrebu* 37: 5–36.

Jazinka Cave, Croatia

Jazinka Cave is located within the boundaries of the Krka National Park, on the left bank of the Krka River in Šibenik-Knin County in southern Croatia. The cave is situated at the top of a gorge at a height of 216m above sea level. Members of the local caving club first drew attention to the cave in 2006 when they recorded it in detail. It constitutes a horizontal tunnel with a total length of c. 42m. The cave was excavated in 2008–9 by archaeologists from the museums in Drniš and Šibenik. The front part of the cave was used as a dwelling area (temporary or permanent) where numerous fragments of pottery and animal bones were found. Conversely, the rear part of the cave was used as a burial place, where numerous fragments of scattered human bones were discovered in a thick layer of sediment (Zaninović 2010).

Beside the human remains, numerous Bronze Age pottery fragments were recovered, together with several bronze objects including a fibula, a spear tip, and a button. Based on the archaeological material, the burials can be dated to the Late Bronze and/or to the beginning of the Early Iron Age (Zaninović 2010), and indeed, one human bone sample from this site was directly radiocarbon dated to 2570 ± 20 BP (PSUAMS-1831; 805–761 cal BCE). A petrous bone from the bone scatter (JAZ '09, sonda D, beneath G01) yielded sample I26742 (male).

Source of sample: Joško Zaninović, Krka National Park, Šibenik

Authors of entry: Joško Zaninović, Krka National Park, Šibenik and Marko Mengušić, Conservation Department in Šibenik, Ministry of Culture of the Republic of Croatia, Šibenik

Reference:

Zaninović J. 2010. Pećina Jazinka. *Hrvatski arheološki godišnjak* 6/2009: 559–60.

Mala Metaljka, Croatia

The analysed burials were excavated at the Mala Metaljka necropolis in 1982. The larger area of Trojvrh includes three hills and connected ravines: Veliki Vrh, Velika Metaljka and Mala Metaljka. Veliki Vrh and Velika Metaljka are defined as hillforts, while Mala Metaljka is considered to be the necropolis used by the inhabitants of, presumably, both settlements. The excavations conducted in 1982 by the Archaeological Museum in Zagreb revealed four intact graves and 11 disturbed burials, most of which were dated to the Early Iron Age based on associated grave goods: a total of 12 finds (Balen-Letunić 1999/2000; 2004). This chronology is further supported by recent research that revealed a shift in millet consumption at the sites of Trošmarija, Sultanov Grob, and Mala Metaljka, dated to 780–540 BCE (Zavodny et al. 2017). It is important to note that the excavations were limited to a very small area due to fear of mines leftover from WWII when Mala Metaljka was used as a military stronghold. The stone constructions of the graves were almost completely destroyed, and skeletal remains were mixed with prehistoric pottery and material dating to the Roman period.

The remains from both intact graves were scattered and mixed with archaeological material dating to different periods (Iron Age, the Roman period) but based on analogies with similar graves from the region, the individuals were probably placed directly into the soil, on their backs, with arms outstretched alongside the body. A petrous bone from Grave 3 yielded sample I24882 (male). A cranial fragment from this individual dated to 2510 ± 15 BP (UCIAMS-179777; 774–549 cal BCE) (Zavodny under review).

Source of sample: Ana Đukić, Archaeological Museum in Zagreb

Author of entry: Ana Đukić, Archaeological Museum in Zagreb

References:

Balen-Letunić, D. 1999/2000. Japodske nekropole s ogulinskog područja. *Vjesnik Arheološkog muzeja u Zagrebu* 32/33: 23–61.

Balen-Letunić, D. 2004. Japodi. In: Balen-Letunić, D. (ed.), *Ratnici na razmeđu istoka i zapada. Starije željezno doba u kontinentalnoj Hrvatskoj*, 212–54. Zagreb: Arheološki muzej.

Zavadny, E., Culleton, B.J., McClure, S.B., Kennett, D.J. and Balen, J. 2017. Minimizing risk on the margins: insights on Iron Age agriculture from stable isotope analyses in central Croatia. *Journal of Anthropological Archaeology* 48: 250–61.

Zavadny, E. Under review. Life and death in the Iron Age Ogulin-Plaški region: new AMS ¹⁴C dates from burial and settlement contexts. *Vjesnik Arheološkog muzeja u Zagrebu*.

Mušego/Mon Sego, Croatia

Mušego/Mon Sego hill, which lies south-east of the Bronze Age Monkodonja/Moncodogno hillfort near Rovinj, Istria, Croatia, comprises three inter-connected plateaus on which lie stone-built tumuli. Three of these tumuli (MS 06, MS 07 and MS 08), located at an elevation of c. 103m above sea-level, were explored in 2006–9 (Hänsel et al. 2008).

Tumulus MS 07, from which bone samples were taken, was constructed of large stone blocks. Its preserved height before excavation was 1.8m, and the stone kerb surrounding the mound is 11–12m in diameter. In the middle of the tumulus a central burial, measuring 2m x 1m x 1m and oriented north–south, had been destroyed and looted (Hänsel et al. 2008).

About 2m north of the first grave, a second (still intact) grave was found; it is this grave from which the analysed samples derive. The tomb chamber is of the same orientation as the first burial and was located in the centre of several concentric stone circles that touched the crown of the original tomb, with which it forms an oval-shaped architectural complex. The tomb chest is composed of thin stone slabs, 3–5cm thick, supported on the south side by a barrier of larger stones. The internal dimensions of the rectangular chamber are 90cm x 50cm x 30cm and it was filled with small stones and dark grey earth in which lay human bones, small fragments of pottery and several pieces of jewellery (amber beads, fragments of bronze coiled wire and the spiral plates of pendants). The chamber contained the incomplete remains of at least four individuals: three adults and at least one child. The time span between construction of the two chambers in the tumulus remains unknown, but radiocarbon dates of the bone samples of the intact tomb date to between the mid-sixteenth and late twelfth centuries BCE (Mihovilić et al. 2009; 2012).

Petrous bones from three of the individuals (Nebengrab 1, lubanja 1, 9; lubanja 2, 11; and 111/2) were successfully analysed for aDNA, yielding samples I26773 (female), I26774 (female) and I26893 (female) respectively.

Source of sample: Damir Matošević, Zavičajni muzej grada Rovinja, Rovinj and Kristina Mihovilić, Archaeological Museum of Istria, Pula

Authors of entry: Kristina Mihovilić, Archaeological Museum of Istria, Pula; Damir Matošević, Zavičajni muzej grada Rovinja, Rovinj; Biba Teržan, Department of Archaeology, Faculty of Arts, University of Ljubljana; and Bernhard Hänsel, Institut für Prähistorische Archäologie, Freie Universität Berlin, Germany †

References:

Hänsel, B., Matošević, D., Mihovilić, K. and Teržan, B. 2008. Mušego (Mon Sego). *Hrvatski arheološki godišnjak* 4/2007: 274–6.

Mihovilić, K., Hänsel, H., Teržan, B., Matošević, D. and Kovačić, Ž. 2009. *Monkodonja i Mušego. Katalog izložbe u Zavičajnom muzeju Grada Rovinja, katalog 79*. Pula: Arheološki muzej Istre.

Mihovilić, K., Hänsel, B., Matošević, D. and Teržan, B. 2012. Burial mounds of the Bronze Age at Mušego near Monkodonja. Results of the excavations 2006–2007. In: Borgna, E. and Müller Celka, S. (eds.), *Ancestral Landscape. Burial mounds in the Copper and Bronze Ages (Central and Eastern Europe – Balkans – Adriatic – Aegean, 4th–2nd millennium B.C.) Proceedings of the International Conference held in Udine, May 15th–18th 2008*, 367–73. Lyon: Maison de l'Orient et de la Méditerranée Jean Pouilloux.

Osijek (Vojarna/Faculty of Education), Croatia

During a rescue excavation in 2008–9 in the Lower Town in Osijek (eastern Croatia), numerous finds of weaponry and horse gear as well as animal and human bones were discovered, and are assumed to belong to the Late La Tène sanctuary of the Scordisci (Dizdar and Filipović 2020). The sanctuary lay at the southern edge of a prominent settlement of the Scordisci: their westernmost centre situated next to the Drava river. At the eastern edge of the excavated area was pit SU 637/638, the upper part of which contained weaponry (Dizdar and Filipović 2020). An almost entirely preserved dog skeleton and human bones were found at the base of the pit. These included the completely preserved cranium (PU 334) of a young adult aged 25–35 years. There were no indications of injury or but slight porotic hyperostosis on both parietal and the occipital bone were noted, as well as the presence of linear enamel hypoplasia on mandibular canines. A petrous bone from this individual yielded sample I26735 (male). Two further petrous bones from this pit proved to be genetic duplicates of I26735 and have therefore been omitted from the analysis.

Analogies for the weaponry and horse gear have been documented in Late La Tène graves of prominent warriors of the Scordisci. Sacrifices were made probably by the warrior elite in the second half of the second century and during the first half of the first century BCE (LTD1), most likely to war deities. The practice of ritual activities at Osijek was probably connected to Late La Tène warrior aristocracy of the Scordisci: the basic political and economic power in society and therefore the main agents of various ritual acts.

Source of sample: Slavica Filipović, Archaeological Museum Osijek

Authors of entry: Marko Dizdar, Institute of Archaeology, Zagreb and Slavica Filipović, Archaeological Museum Osijek

Reference:

Dizdar, M. and Filipović, S. 2020. A Late La Tène Scordiscan sanctuary from Osijek (Eastern Slavonia, Croatia)? In: V. Sîrbu and A. Peşan (eds.), *Temples and Cult Places from the Second Iron Age in Europe. Proceedings of the 2nd International Colloquium “Iron Age Sanctuaries and Cult Places at the Thracians and their Neighbours”*, 87–109. Alun: Editura Dacica.

Osijek–Hermanov vinograd, Croatia

Osijek–Hermanov vinograd is an important archaeological site in eastern Croatia dating to the Middle Neolithic Sopot culture. The first archaeological investigations of the site were conducted at the end of the nineteenth century, while the most recent rescue excavations in advance of construction of the southern Osijek bypass were conducted in 2013 by the private

company Kaducej Ltd. An area of 3,200m² was excavated, revealing several cultural layers 1.6–3.2m deep, with five distinct phases of occupation. There were numerous stone, bone and pottery artefacts (over 90,000 fragments), as well as four monumental dwelling features measuring over 100m² in size and located adjacent to one other (Los 2020).

A petrous bone was successfully analysed from an individual (AN6, G2), aged 20–30 years, yielding sample I26741 (female), dating to 5786±30 BP (SUERC-50664; 4713–4548 cal BCE) (Los 2020). This individual, in a grave within a pit, was lying on their left side in a flexed position and had mild healed ectocranial porosity on both parietal bones and the occipital bone.

Source of sample: Dženi Los, Josip Burmaz, Kaducej Ltd., Split

Authors of entry: Dženi Los, Josip Burmaz, Kaducej Ltd., Split and Mario Novak, Centre for Applied Bioanthropology, Institute for Anthropological Research, Zagreb

Reference:

Los, D. 2020. Rezultati zaštitnih arheoloških istraživanja lokaliteta AN 6 Hermanov vinograd 1 na trasi južne obilaznice grada Osijeka. *Annales Instituti Archaeologici* 16: 78–89.

Osor–St. Peter, Croatia

Osor is located on the isthmus between the islands of Cres and Lošinj, and is the largest historical site of this island group, and indeed of the entire Kvarner region. The prehistoric settlement began as early as the Late Bronze Age and reached its peak (as one of the most prominent "metropolises" of Kvarner, and the safest city on the eastern coast of the Adriatic) in the first millennium BCE (Blečić Kavur 2015; 2020; Blečić Kavur and Kavur 2013). During research campaigns at the medieval church and monastery of St. Peter, conducted by S. Bully, M. Čaušević-Bully, M. Jurković and I. Marić, five Iron Age graves were discovered. The site is located at the highest point of the Iron Age settlement, and this group of recently excavated graves (with their funeral rites and grave goods) represent new and previously unknown Iron Age practices in Osor and in the Cres-Lošinj archipelago as a whole. The graves, based on the typological and stylistic characteristics of the material culture and associated radiocarbon determinations, date to the tenth–eighth centuries BCE, and thus represent the earliest phase of burial practice, at the beginning of the Early Iron Age (Bully et al. 2017; Čaušević-Bully et al. 2017).

A tooth from a fragmented and partially preserved individual (533) aged 20–35 years (in Grave 5.184) yielded sample I24883 (female). The deceased was buried in a crouched position enclosed by large unworked stones, but the upper part of the grave was most likely destroyed during later (medieval) interventions in the cemetery (Čaušević-Bully et al. 2017) and the skeleton was represented only by the mandible, both humeri and the right ribs. No pathological changes were observed except for slight dental wear on all present teeth.

The grave contained various objects representing elements of female dress traditionally associated with individuals of higher rank in their society, indicating exceptional status of the deceased. Instead of the desired imported items, however, the grave inventory also included items of local production (a spectacle fibula, bracelets, three amber beads, eight glass beads, and 12 bone beads). The grave is roughly dated to the second half of the ninth century BCE, or possibly the early eighth century BCE, i.e. the second phase of the Iron Age of Kvarner (Čaušević-Bully et al. 2017).

Source of sample: Morana Čaušević-Bully, Université de Franche Comté/UMR Chrono-Environnement, Besançon

Authors of entry: Morana Čaušević-Bully, Université de Franche Comté/UMR Chrono-Environnement, Besançon and Martina Blečić Kavur, Faculty of Humanities, University of Primorska, Koper

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Blečić Kavur, M. and Kavur, B. 2013. The Amphora from Osor. *Hortus Artium Medievalium* 19: 209–14.

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Čaušević-Bully, M., Marić, I., Bully, S., Jurković, M., Dugorepec, L. and Blečić Kavur, M. 2017. Le monastère Saint-Pierre d'Osor (île de Cres): dixième et onzième campagne d'études archéologiques. *Hortus Artium Medievalium* 23: 797–808.

Skradnik–Sultanov grob, Croatia

The site of Skradnik, located in the Ogulinsko–Plašćanska valley in the region of Lika, yielded two large tumuli and a flat necropolis. The larger tumulus, known locally as “Sultanov grob” (“Sultan's Tomb”), was excavated in 1898, when a single inhumation with no grave goods was discovered (Božičević 1898/1899). In 1988, small test excavations were conducted at the tumulus by the Archaeological Museum in Zagreb, revealing three intact graves and one disturbed burial. The tumulus measured 40m in diameter and about 3m in height, but it was significantly destroyed by agricultural activities, as indicated by the surrounding ditch, recorded 16m from the center of the tumulus; this consisted of two parallel rows of large stones with an infill of smaller rocks. The last excavations of the tumulus were carried out in 2001, but were limited to the south-western part of the mound (Balén-Letunić 1999/2000; Tonc 2015; Balén-Letunić and Perkić 2017).

In both of the tumuli at Skradnik, as well as in the flat necropolis, the deceased were differently orientated and were laid on a layer of soil or small rocks that was then capped with larger unmodified stones. They were also often placed directly into the soil, sometimes with a large stone above the head, but with no actual grave construction (Balén-Letunić 1999/2000). The burials in both of the tumuli were mostly dated to the Early Iron Age (c. eighth–sixth centuries BCE), while the flat necropolis is largely dated to the Late Iron Age (up to the first century BCE). Grave 2 from the 1898 excavations was subsequently dated to 2485±20 BP (UCIAMS-132361; 768–540 cal BCE; Zavadny et al. 2017; under review).

A petrous bone from one of the intact graves (Grave 3) excavated from the from the tumulus in 1988 was successfully analysed for aDNA and yielded sample I24879 (female); a humerus from this individual was AMS dated to 2510±15 BP (UCIAMS-135086; 774–549 cal BCE; Zavadny 2017; under review). The individual, who was lying on their back with their arms stretched alongside their body, had been placed directly into the soil with no additional grave architecture (Balén-Letunić 1999/2000).

Source of sample: Ana Đukić, Archaeological Museum in Zagreb

Author of entry: Ana Đukić, Archaeological Museum in Zagreb

References:

Balen-Letunić, D. 1999/2000. Japodske nekropole s ogulinskog područja. *Vjesnik Arheološkog muzeja u Zagrebu* 32/33: 23–61.

Balen-Letunić, D. and Perkić, D. 2017. Onostrani ili transalpinski gradovi/Transalpine cities, or cities on the far side of the Alps. In: L. Bakarić (ed.), *Japodi – Zaboravljeni Gorštaci/Iapodes – The Forgotten Highlanders*, 69–82. Zagreb: Arheološki muzej u Zagrebu.

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Tonc, A. 2015. *Protopovijesne Zajednice na Sjevernom Dijelu Istočne Obale Jadrana i Njezinu Zaleđu*. Unpublished PhD thesis, University of Zagreb.

Zavadny, E. 2017. *New Approaches to Cultural Change and Continuity at the Bronze-Iron Age Transition in Lika, Croatia*. Unpublished PhD thesis, Dept. of Anthropology, The Pennsylvania State University.

Zavadny, E., Culleton, B.J., McClure, S.B., Kennett, D.J. and Balen, J. 2017. Minimizing risk on the margins: Insights on Iron Age agriculture from stable isotope analyses in central Croatia. *Journal of Anthropological Archaeology* 48: 250–61.

Zavadny, E. Under review. Life and death in the Iron Age Ogulin-Plaški region: new AMS ¹⁴C dates from burial and settlement contexts. *Vjesnik Arheološkog muzeja u Zagrebu*.

Smiljan, Croatia

The site of Smiljan, situated near the hillfort site of Miljača, was excavated in 1904, and again in 1980–1 (Hoffiller 1905; Bakarić 1986). The first excavations investigated necropolis I, with 22 inhumation and several cremation graves. Necropolis II was discovered in 1980, south of the hillfort, when a local farmer uncovered five bronze torcs. In 1980, a 5x5m trench was excavated, revealing three inhumation graves with grave goods and stone constructions. In 1981, the Archaeological Museum in Zagreb conducted research at the site: a total of six 5x5m trenches were excavated, revealing 15 inhumation and two cremation graves, some of which were disturbed by modern-day agricultural activities. The grave constructions most often included an enclosure made of larger unmodified stones. The analyses of associated grave goods suggest that the two necropolises were in use somewhat simultaneously, perhaps by different social groups, from the HaB3 phase of the Late Bronze to the HaC phase of the Early Iron Age, noting that necropolis I was in use for slightly longer, up to HaD1 (Hoffiller 1905; Bakarić 1986; Drechsler-Bižić 1983; 1987). Some of the burials from necropolis II were subsequently dated to 835–800 BCE (grave 6), 800–560 BCE (grave 15), and 825–790 BCE (unknown male burial) (Zavadny et al. 2017).

Six petrous bones from individuals Necropolis II (excavated in 1981) were successfully analysed for aDNA, while a petrous bone from Grave 2 failed analysis.

Grave 6 yielded sample I23911 (male); a mandible for this individual provided an AMS date of 2660±15 BP (UCIAMS-169832; 891–797 cal BCE; Zavadny 2017). The individual was found at a depth of 0.35 m and had been placed on a layer of small crushed rocks encircled by

larger unmodified stones. They were lying on their back, with arms stretched alongside the body, and their head faced east. No grave goods were recorded.

The individuals from double grave 9 and 9A yielded samples I23996 (female) and I23995 (male) respectively. Cranial fragments from these individuals dated to 2610 ± 20 BP (UCIAMS-172395; 809–779 cal BCE) and 2585 ± 25 BP (UCIAMS-169833; 810–675 cal BCE) respectively (Zavodny 2017). The bodies, which were placed on top of each other, lay at a depth of 0.2–0.9 m and faced east–west. Both individuals were placed on their backs, with their arms stretched alongside the body, and were encircled by large unmodified stones. The male was not accompanied by any grave goods, but the female was interred with a chain comprising small bronze rings and an amber bead.

Grave 15 yielded sample I24639 (male); a mandible for this individual provided an AMS date of 2545 ± 20 BP (UCIAMS-172396; 795–567 cal BCE; Zavodny 2017). This individual lay at a depth of 0.3 m and was lying on their back, with arms stretched alongside the body. The construction of the grave was destroyed and it contained no grave goods.

Grave 16 yielded sample I24638 (male), from a young individual lying at a depth of 0.4–0.5 m and surrounded by large unmodified stones. This individual also lay on their back with arms stretched alongside the body and east facing east. No grave goods were recorded but a cranial fragment yielded an AMS date of 2545 ± 20 BP (UCIAMS-169835; 795–567 cal BCE; Zavodny 2017).

Grave 17 yielded sample I23904 (female). A mandible from this individual dated to 2535 ± 15 BP (UCIAMS-169836; 789–568 cal BCE; Zavodny 2017; Zavodny et al. 2019). This individual lay at a depth of 0.4 m, on their back with arms stretched alongside the body and their head facing east. They had been placed directly onto the soil and surrounded by large unmodified stones. Grave goods include a fragmented bronze pin with a round head and 19 beads made of white and blue glass paste. Such pins appear in BrD–HaA but can be traced up to HaC (fourteenth–eighth century BCE) in the territory of Lika.

Source of sample: Ana Đukić, Archaeological Museum in Zagreb, Zagreb

Author of entry: Ana Đukić, Archaeological Museum in Zagreb, Zagreb

References:

Bakarić, L. 1986. Rezultati novih istraživanja u Smiljanu. *Vjesnik Arheološkog muzeja u Zagrebu* 19: 129–40.

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Zavodny, E., Culleton, B.J., McClure, S.B., Kennett, D.J. and Balen, J. 2017. Minimizing risk on the margins: insights on Iron Age agriculture from stable isotope analyses in central Croatia. *Journal of Anthropological Archaeology* 48: 250–61.

Zavodny, E., Culleton, B.J., McClure, S.B., Kennett, D.J. and Balen, J. 2019. Recalibrating grave-good chronologies: new AMS radiocarbon dates from Late Bronze Age burials in Lika, Croatia. *Antiquity* 93(376): 113–27.

Velim–Kosa, Croatia

In 2013 and 2014, Archaeological Museum Zadar carried out a rescue excavation at the construction site of Stankovec Photovoltaic Power Station (Zadar County, northern Dalmatia). Four Liburnian culture tumuli (stone burial mounds), located relatively close to each other (c. 20m away on average), were investigated. Most were well-preserved and were predominantly constructed of rubble and, to a lesser extent, of earth. The only exception is Tumulus 4, which was damaged by machines when the road along the southern edge of the future construction site was being created. Although the tumuli are well-preserved, the grave structures within them are rather damaged (Čondić 2015).

Three individuals were successfully analysed for aDNA.

A tooth from Grave 1 in Tumulus 2 (diameter: 9m; height: 95cm) yielded sample I24345 (male). Tumulus 2 contained a single grave which had been severely damaged, with only the northern lining and shorter western side remaining in situ. Disarticulated human bones were found throughout the 30cm-thick layer of grave fill and were scattered across an area measuring c. 100cm x 60cm, both within and outside the confines of the grave. The positions of the bones indicate that the individual's head had originally faced west. A bronze ring was found inside the grave and numerous pottery sherds were distributed across the tumulus (Čondić 2015).

A petrous bone from Grave 1 in Tumulus 3 (diameter: 10.7m; height: 120cm) yielded sample I24342 (male), dating to 3185±20 BP (UCIAMS-233623; 1501–1421 cal BCE). Tumulus 3 also contained only a single grave which had been severely damaged, with only one small grave slab remaining in situ. The positions of human bones indicate that the grave had been oriented east–west and that the remaining slab formed part of its shorter, eastern side. No grave goods were found in the area of the grave itself, but a small torc was found at the apex of the tumulus, underneath the surface stones and 150cm away from the preserved grave slab, and it is likely that it was associated with Grave 1. Pottery sherds were found across the surface of the tumulus (Čondić 2015).

A tooth from Tumulus 4 yielded sample I24344 (female). Tumulus 4 was largely damaged by construction machines and was reduced almost to the level of the surrounding terrain. Despite the damage, a burial was confirmed when two grave goods (a pair of bronze tweezers and a brooch) were found during excavation. Unfortunately, the grave architecture was completely destroyed, making it impossible to establish the position of the grave. Numerous pottery sherds were found throughout the tumulus and the surrounding area (Čondić 2015).

Based on the few grave goods and the pottery sherds recovered, the tumuli date to between the Late Bronze Age and the end of the Early Iron Age (fifteenth–fifth centuries BCE).

Source of sample: Natalija Čondić, Archaeological Museum Zadar, Zadar

Author of entry: Natalija Čondić, Archaeological Museum Zadar, Zadar

Reference:

Čondić N. 2015. Velim–Kosa (Proizvodna zona Stankovci). *Hrvatski arheološki godišnjak* 11/2014: 513–5.

CZECH REPUBLIC

Bílina (Büschel), Teplice district, North-West Bohemia, Czech Republic

Rescue excavations in 1945–6 by G. Laube (Bílina Museum) at a sand extraction pit (parcel no. 1562/2) unearthed an extensive settlement comprising some 100 features and dating to the Late–Final Bronze Age (Knovíz culture). Several inhumations of the Corded Ware and Únětice cultures were also found at the site (for basic information see Muška 1990, 23–4).

A petrous bone from an individual aged 18–25 years in grave/settlement pit 8 (3, P7A-7587 (861)), accompanied by a ceramic cup and a bronze pin (Hanáková et al. 1977, 222–3, fig. 56; Muška 1990, 23) was successfully analysed for aDNA and yielded sample I13789 (female), dating to c. 1300–800 BCE.

Source of sample: National Museum, Prague

Authors of entry: Jan Blažek and Zdeněk Vytlačil

References:

Hanáková, H., Stloukal, M. and Muška, J. 1977. Antropologické nálezy ze severozápadních Čech převzaté ze starších fondů Krajského muzea v Teplicích/Antropologische Funde aus Nordwestböhmen, die aus den älteren Fonds des Kreismuseums in Teplice übernommen wurden. *Sborník Národního muzea v Praze, řada B – přírodní vědy* 33: 159–264.

Muška, J. 1990. *Archeologická Sbírka bývalého Městského Muzea v Bílině/Archäologische Sammlung des ehemaligen Stadtmuseums in Bílina. Archeologický výzkum v severních Čechách* 17. Teplice: Krajské muzeum.

Bílina (Rudiay I/Maxim Gorkij), Teplice district, North-West Bohemia, Czech Republic

An extensive settlement area on the left bank of the river Bílina is described in the literature under the names of several sites with changing ownership of the area and precise location: the Rudiay I (and later the Maxim Gorkij) coal mine, the Engels glassworks and others. The area had been investigated since the end of the nineteenth century, and today has been almost entirely destroyed by open cast coal mining. It was occupied and used for burial from the Eneolithic (Cord Ware culture) to the Early Middle Ages. Rescue excavation conducted in the Spring of 1954 by E. Pleslová and I. Pleinerová (Institute of Archaeology Prague, Most branch) yielded an extensive Knovíz culture settlement, with other isolated features: a Cord Ware grave, an Únětice culture grave and Late Hallstatt cultural layers containing ceramics.

Two petrous bones were successfully analysed from the following, all dating to c. 1300–800 BCE:

- an individual aged 35–50 years from a settlement pit (134, P7A-7586 (863)) containing ceramics, bone tools, animal bones and daub (acquired by A. H. Fassel on August 24 1899 at the Engels Glassworks; Karafiat 1919, 16; Hanáková et al. 1977, 221; Budinský 1978, 23), yielding sample I13791 (female)

- an individual aged 18–25 years from settlement pit G1/H1 (22-23, P7A-7590 (2840)), recovered from the Rudiay I mine (parcel no. 1328/1-2) and handed to G. Laube by workers on September 28 1940 (Hanáková et al. 1977, 222, figs. 54–55; Muška 1990, 25), yielding sample I17311 (female)

A further petrous bone was sampled from an individual aged 25–40 years in burial 1 (847; 1, P7A-31267; Pleslová and Pleinerová 1956, 789, 884), yielding sample I13781 (female). The burial was not accompanied with dateable finds but is thought to date to the Knovíz culture (c. 1300–800 BCE; Pleslová and Pleinerová 1956).

Source of sample: National Museum, Prague

Authors of entry: Jan Blažek, Miroslav Dobeš, Zdeněk Vytlačil and Petr Velemínský

References:

Bouzek, J., Koutecký, D. and Neustupný, E. 1966. *The Knovíz Settlement of North-West Bohemia/Knovízské osídlení severozápadních Čech*. Prague: National Museum (Fontes Archaeologici Pragenses 10).

Budinský, P. 1978. *Přehledné dějiny Teplicka. 1/2. Teplicko v pravěku II (mit Zusammenfassung)*. Teplice: Krajské muzeum.

Hanáková, H., Stloukal, M. and Muška, J. 1977. Antropologické nálezy ze severozápadních Čech převzaté ze starších fondů Krajského muzea v Teplicích/Antropologische Funde aus Nordwestböhmen, die aus den älteren Fonds des Kreismuseums in Teplice übernommen wurden. *Sborník Národního muzea v Praze, řada B – přírodní vědy* 33: 159–264.

Karafiát, K. 1919. Tätigkeits-Bericht für das Verwaltungsjahr 1918/1919. *Tätigkeitsbericht der Museumsgesellschaft Teplitz* 1919, 3–35.

Muška, J. 1990. *Archeologická Sbírka bývalého Městského Muzea v Bělině/Archäologische Sammlung des ehemaligen Stadtmuseums in Bělina. Archeologický výzkum v severních Čechách 17*. Teplice: Krajské muzeum.

Pleslová, E. and Pleinerová, I. 1956. Pravěké nálezy na dole Maxim Gorkij v Bělině/Trouvailles préhistoriques de la mine Maxim Gorkij à Bělina, Bohême. *Archeologické Rozhledy* 8: 783–90, 810–2, 878–9, 883–4.

Bělina (Titzler), Teplice district, North-West Bohemia, Czech Republic

The site has been destroyed by sand extraction over a long period, and a large number of graves from the Eneolithic (published in Narasimhan et al. 2019) to the Early Middle Ages have been documented. However, many other graves and pits with human bones have been destroyed without proper recording; this is the case for the Urnfield period from which the sample below derives.

A petrous bone from an adult (137B, P7A-7997 (2839)) deposited in one of several settlement pits identified by R. R. von Weinzierl during sand extraction on September 24 1901 (Hanáková et al. 1977, 220–1; Budinský 1978, 14), yielded sample I17310 (male), dating to the Štítary stage of the Knovíz culture (1000–800 BCE).

Source of sample: National Museum, Prague

Authors of entry: Jan Blažek and Zdeněk Vytlačil

References:

Budinský, P. 1978. *Přehledné dějiny Teplicka. 1/2. Teplicko v pravěku II (mit Zusammenfassung)*. Teplice: Krajské muzeum.

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Karafiat, K. 1919. Tätigkeits-Bericht für das Verwaltungsjahr 1918/1919. *Tätigkeitsbericht der Museumsgesellschaft Teplitz* 1919, 3–35.

Narasimhan, V. M., Patterson, N., Moorjani, P., Rohland, N., Bernardos, R., Mallick, S., Lazaridis, I., Nakatsuka, N., Olalde, I., Lipson, M., Kim, A. M., Olivieri, L. M., Coppa, A., Vidale, M., Mallory, J., Moiseyev, V., Kitov, E., Monge, J., Adamski, N., Alex, N., Broomandkhoshbacht, N., Candilio, F., Callan, K., Cheronet, O., Culleton, B. J., Ferry, M., Fernandes, D., Freilich, S., Gamarra, B., Gaudio, D., Hajdinjak, M., Harney, É., Harper, T. K., Keating, D., Lawson, A. M., Mah, M., Mandl, K., Michel, M., Novak, M., Oppenheimer, J., Rai, N., Sirak, K., Slon, V., Stewardson, K., Zalzal, F., Zhang, Z., Akhatov, G., Bagashev, A. N., Bagnera, A., Baitanayev, B., Bendezu-Sarmiento, J., Bissembaev, A. A., Bonora, G. L., Charginov, T. T., Chikisheva, T., Dashovskiy, P. K., Derevianko, A., Dobeš, M., Douka, K., Dubova, N., Duisengali, M. N., Enshin, D., Epimakhov, A., Fribus, A. V., Fuller, D., Goryachev, A., Gromov, A., Grushin, S. P., Hanks, B., Judd, M., Kazizov, E., Khokhlov, A., Krygin, A. P., Kupriyanova, E., Kuznetsov, P., Luiselli, D., Maksudov, F., Mamedov, A. M., Mamirov, T. B., Meiklejohn, Ch., Merrett, D. C., Micheli, R., Mochalov, O., Mustafokulov, S., Nayak, A., Pettener, D., Potts, R., Razhev, D., Rykun, M., Sarno, S., Savenkova, T. M., Sikhymbaeva, K., Slepchenko, S. M., Soltobaev, O. A., Stepanova, N., Svyatko, S., Tabaldiev, K., Teschler-Nicola, M., Tishkin, A. A., Tkachev, V. V., Vasilyev, S., Velemínský, P., Voyakin, D., Yermolayeva, A., Zahir, M., Zubkov, V. S., Zubova, A., Shinde, V. S., Lalueza-Fox, C., Meyer, M., Anthony, D., Boivin, N., Thangaraj, K., Kennett, D. J., Frachetti, M., Pinhasi, R. and Reich, D. 2019. The formation of human populations in South and Central Asia. *Science* 365(6457), eaat 7487. doi: 10.1126/science.aat7487.

Březno u Loun, Louny district, North-West Bohemia, Czech Republic

A long-term, systematic excavation of a multi-period site (with evidence for settlement and burial activities dating from Neolithic to the Early Middle Ages) was undertaken intermittently from 1954–80 by I. Pleinerová, (Institute of Archaeology, Prague). Some 300 settlement pits of the Knovíz culture were investigated at the site, with human bones being recovered from at least 13 of these (Pleinerová and Hrala 1988).

Samples were taken from two individuals deposited in Knovíz culture settlement pit 49 (see Pleinerová and Hrala 1988, 52, 55, 183, figs. 25:1–13), dating to c. 1300–800 BCE. A petrous bone from Skeleton A (49, P7A-31696A (2102)), an individual aged 30–50 years, yielded sample I16538 (female) but a tooth from Skeleton B (1054_6; P7A-31696/B), an individual aged over 25 years, failed analysis.

Source of sample: National Museum, Prague

Authors of entry: Jan Blažek and Petr Velemínský

Reference: Pleinerová, I. and Hrala, J. 1988. *Březno. Osada lidu knovízské kultury v severozápadních Čechách/Březno. Die Siedlung des Volkes mit der Knovízer Kultur in Nordwestböhmen*. Louny: Severočeské Nakladelství.

Břvany, Louny district, North-West Bohemia, Czech Republic

Settlement pit 1/63 was investigated in 1963 by E. Neustupný of the Institute of Archaeology in Prague (Most branch) during construction of a pig farm. The pit, which dates to the Štítary stage of the Knovíz culture (c. 1000–800 BCE), contained not only domestic settlement waste, but also the remains of three human individuals (Chochol 1979, 22, nr. 8–11; Bouzek and Koutecký 1980, 393; Koutecký et al. 1980, 119).

Teeth from each of these individuals was successfully analysed for aDNA. The first derived from Skeleton A (P7A-34939A (1054_4)), an individual aged 30–50 years, and yielded sample I14481 (male); the second derived from Skeleton B (LLI2; P7A-34939B (P6637)), an individual aged 30–50 years, and yielded sample I20525 (male); and the third derived from Skeleton C (LLP2; P7A-34939C (P6638)), an individual aged over 50 years, and yielded sample I20526 (female).

Source of sample: National Museum, Prague

Authors of entry: Jan Blažek and Petr Velemínský

References:

Bouzek, J. and Koutecký, D. 1980. Mohylové a knovízské kostrové „pohřby“ v jamách ze severozápadních Čech/Skelettbestattungen in Gruben der Knovízer und Hügelgräberkultur aus Nordwestböhmen. *Památky archeologické* 71: 360–432.

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Koutecký, D. 1980. *Archeologické výzkumy v severozápadních Čechách v letech 1953–1972/Archäologische Ausgrabungen in Nordwestböhmen in den Jahren 1953–1972. Archeologické studijní materiály* 13. Praha: Archeologický ústav ČSAV, pracoviště Praha.

Bžany, Teplice district, North-West Bohemia, Czech Republic

During extraction works in 1944, a settlement pit with a Linear Pottery culture burial (c. 5500–5000 BCE) was revealed in the face of the Karolina II surface mine. The skeletal remains, of an adult aged 18–30 years, were removed by young boys, who later reported the find. Investigations were led by D. Stössel of the then “Amt für Vorgeschichte” in Teplice, but his follow-up work did not recover any additional bones (see Hanáková et al. 1977, 166; Zápotocká 1998, 180). As shown during further excavation after WWII, the site was continuously occupied during Neolithic and Eneolithic. A petrous bone from this individual (1646; 145-150/44, P7A-7557, 155) yielded sample I15818 (female).

Source of sample: National Museum, Prague

Authors of entry: Miroslav Dobeš and Petr Velemínský

References:

Hanáková, H., Stloukal, M. and Muška, J. 1977. Antropologické nálezy ze severozápadních Čech převzaté ze starších fondů Krajského muzea v Teplicích/Antropologische Funde aus Nordwestböhmen, die aus den älteren Fonds des Kreismuseums in Teplice übernommen wurden. *Sborník Národního muzea v Praze, řada B – přírodní vědy* 33: 159–264.

Zápotocká, M. 1998. *Bestattungsritus des böhmischen Neolithikums (5500–4200 B.C.)*. Praha: Gräber und Bestattungen der Kultur mit Linear-, Stichband- und Lengyelkeramik.

Chouč, Teplice district, North-West Bohemia, Czech Republic

Excavations on a shoulder on the south slope of the Bořeň outcrop (parcel 168/2), undertaken in 1925–6 by G. Laube (Laube 1927; Laube 1932), investigated around 50 Knovíz culture (c. 1300–800 BCE) features, several of which contained human remains. The site also yielded isolated finds from the Eneolithic, Early and Middle Bronze Ages, the Hallstatt and La Tène periods, and the Early Middle Ages (Smrž 1991, 66, 80–84; Smrž 1995, 48, Abb. 9:1–7), and given its location, is regarded as having a ritual function (Smrž and Blažek 2002, 798–9, Fig. 5).

Samples from six Knovíz culture individuals, all dating to c. 1300–800 BCE, were successfully analysed for aDNA.

Two individuals were sampled from settlement pit 20 (Anlage 5b), which is described in the literature as containing a burial in an extended position (Laube 1927, 49; Muška 1990, 47) but, according to anthropological analysis, yielded fragments of the bones of two individuals (Hanáková et al. 1977, 225–6, fig. 57). A tooth from adult Skeleton A (URM3; P7A-8019 (P6627)), yielded sample I20515 (female); while a petrous bone from Skeleton B (P7A-8020 (2103)), a child aged 2–3 years, yielded sample I16089 (female).

Petrous bones from four further individuals were sampled from feature 38, which also contained ceramic fragments and plate bronze (Laube 1932, 26–7, fig. on p27; Spurný 1950, 15–16, n24ff; Hanáková et al. 1977, 226–8, figs. 58–61; Muška 1990, 48). All the skeletons lay roughly alongside one another, in a single layer, with three in a supine position and one lying on its left side. Skeleton A (19/2, ind. A, P7A-7984 (865)), a child aged 8–10 years lying in a supine position, yielded sample I13793 (male); Skeleton B (19/2, ind. B, P7A-7985 (868)), an individual aged 30–50 years, yielded sample I13796 (female); Skeleton C (19/2, ind. C, P7A-7986 (864)), an individual aged 35–50 years, yielded sample I13792 (male); and Skeleton D (19/2, ind. D, P7A-7987 (860)), an individual aged over 50 years, yielded sample I13788 (male).

Source of sample: National Museum, Prague

Authors of entry: Jan Blažek and Petr Velemínský

References:

Hanáková, H., Stloukal, M. and Muška, J. 1977. Antropologické nálezy ze severozápadních Čech převzaté ze starších fondů Krajského muzea v Teplicích/Antropologische Funde aus Nordwestböhmen, die aus den älteren Fonds des Kreismuseums in Teplice übernommen wurden. *Sborník Národního muzea v Praze, řada B – přírodní vědy* 33: 159–264.

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Smrž, Z. 1991. Výšinné lokality mladší doby kamenné až raného středověku v severozápadních Čechách. Pokus o sídelně historické hodnocení/Höhenlokalitäten in der Zeitspanne von der jüngeren Steinzeit bis zum frühen Mittelalter im nordwestlichen Teil Böhmens. Versuch um eine siedlungs-historische Bewertung. *Archeologické rozhledy* 43: 3–89, 177–8.

Smrž, Z. 1995. Höhenlokalitäten der Knovízské Kultur in NW-Böhmen. *Památky archeologické* 86: 38–80.

Smrž, Z. and Blažek, J. 2002. Nález bronzových srpů z hory Kletečná (706 m n. m.) v Českém středohoří. K votivním nálezům z vrcholků kopců a hor/Bronze sickles from Kletečná Hill (706 m a.s.l.) in the České středohoří Mts. On votive finds from hilltops and mountains. *Archeologické rozhledy* 54: 791–810.

Spurný, V. 1950. Kostrové pohřby v knovízské kultuře/Sépultures à squelettes dans la civilisation de Knovíz. *Památky archeologické* 43: 13–20, 136.

Dobroměřice, Louny district, North-West Bohemia, Czech Republic

Rescue excavations at a sandpit, conducted from the 1950s to the end of the 1960s by staff of the Louny Museum and the Institute of Archaeology in Prague (Most branch), investigated features from the Neolithic to the Early Middle Ages.

A petrous bone taken from an individual aged 35–50 years (2109; feature 14/67, gr. 1, P7A-35794), who was one of three possible skeletons in grave 14/67 excavated in 1967 (Koutecký 2006, 31, 35, fig. 10), yielded sample I16092 (male). There were no dateable artefacts accompanying the burial but it likely dates to the Hallstatt period or later.

Source of sample: National Museum, Prague

Authors of entry: Miroslav Dobeš and Petr Velemínský

Reference: Koutecký, D. 2006. Mlado- až pozdně halštatské sídliště a chata z doby římské v Dobroměřicích u Loun, Ústecký kraj, in M. Sýkora and J. Hlavová (eds.), *Archeologické výzkumy v severozápadních Čechách v letech 1998–2002. Tomáši Velímskému k šedesátinám. Příspěvky k pravěku a rané době dějinné severozápadních Čech 14*, 27–52. Most: Ústav archeologické památkové péče severozápadních Čech.

Hostivice-Palouky, Prague-West district, Central Bohemia, Czech Republic

Rescue excavation of a 7ha area by I. Pleinerová and P. Sankot (Roztoky Museum), during construction of a warehouse area in 2001–3, unearthed a site occupied from the Neolithic to the Early Medieval period. A total of 2800 larger features (graves, settlement pits, post-built structures) and more than 1000 postholes were investigated. Human remains were found in features belonging to the following chronological/cultural periods: Linear Pottery (see below), Stroked Pottery (1 cremation grave), Bell Beaker (1 grave), Early Bronze Age Únětice (19 burials in 12 graves), and Late Bronze Age Knovíz (23 features containing the remains of 28 individuals, for analysed individuals see below), together with 1 skeleton from the Migration Period. The site has not yet been fully published, but initial analyses are contained within a series of finds reports (Pleinerová 2002; 2003a; Sankot and Košta 2004a; 2004b; Pleinerová et al. 2004), summaries (Limbský et al. 2002; Dobisíková et al. 2003; Pleinerová 2003b; 2006) and partial contributions (e.g. Pleinerová 2004; 2009a; 2009b; Pleinerová and Zápotocká 2004).

Nineteen individuals (seventeen petrous bones and two teeth) were successfully analysed for aDNA.

Neolithic (Linear Pottery culture: 5500–4500 BCE)

Two petrous bones were sampled from individuals from the Linear Pottery Culture: a mature individual aged over 50 years (1768; SIII/2, 17692, obj. 562., P7A-17692) in grave 562 (Pleinerová 2002, 7, fig. 371; Pleinerová 2003a, b) yielded sample I15650 (male); while an individual aged 35–60 years (HOST_1021; P7A-17702) in grave 1021 (Pleinerová 2002, 7, fig. 223; Pleinerová 2003a, b) yielded sample I7950 (female).

Late Bronze Age (Knovíz Culture: c. 1300–800 BCE)

Fifteen petrous bones and two teeth were sampled from Knovíz Culture burials. From the petrous bones: a child of 5–7 years (2518; 8, P7A-17666) in settlement pit 8 (Pleinerová 2002, 6, fig. 3) yielded sample I16182 (male); the skull of an adult (2521; 253, P7A-17685) at the base of settlement pit 253 (Pleinerová 2002, 59, tab. 43) yielded sample I15957 (female); an individual aged 35–60 years (871; 384, P7A-17689) in settlement pit 384 (Pleinerová 2002, 33–4, fig. 367) yielded sample I13799 (female); the partial skull of an individual aged 30–50 years (858; 686, P7A-17694) from settlement pit 686 (Pleinerová 2002, 68) yielded sample I13786 (male); the partial skull of a child aged 6–8 years (2519; 1702, P7A-17707) from settlement pit 1702 (Pleinerová 2002, 88, tab. 154) yielded sample I15955 (male); an individual aged over 30 years (2525; 1852, P7A-17894) in settlement pit 1852 (Pleinerová et al. 2004, 21, fig. A18) yielded sample I15961 (female); and an individual aged 35–60 years (2491; 1999, P7A-17899) in settlement pit 1999 (Pleinerová et al. 2004, 22, fig. A20) yielded sample I15041 (male).

Two individuals in settlement pit 387 (Pleinerová 2002, 34, fig. 368–370; Pleinerová 2004, 227, fig. 3) yielded sample I13783 (female), from the prone burial (Skeleton A) of an individual aged 35–50 years (849; 387, P7A-17690) in the upper part of the pit, and sample I15956 (female) from a child of 6–7 years (Skeleton B; 2520; 387, P7A-17701) in the lower part of the pit.

Two further individuals from settlement pit 897 (Pleinerová 2002, 34–5, fig. 375) yielded sample I15959 (female), from the prone burial (Skeleton A, II) of an individual aged 30–50 years (2523; 897, P7A-17696) in the northern part of the pit, and sample I13794 (male) from an individual aged 25–35 years (Skeleton B; 866; 897, P7A-17697) in the southern part of the pit.

Four stacked individuals were also sampled from settlement pit 1953 (Pleinerová et al. 2004, 21–22, fig. A19; Pleinerová 2004, 227, fig. 4). Skeleton A, an individual aged 30–50 years (859; 1953, P7A-17894), yielded sample I13787 (female); Skeleton B, an individual aged 30–50 years (2524; 1953, P7A-17896), yielded sample I15960 (female); Skeleton C, an individual aged 30–50 years (870; 1953, P7A-17897), yielded sample I13798 (female); and Skeleton D, an adolescent aged 15–19 years (2522; 1953, P7A-17898), yielded sample I15958 (female).

The teeth yielded sample I17611 (female), from the skull of an individual aged 20–35 years (2583; 388, P7A-17691) at the base of settlement pit 388 (Pleinerová 2002, 62, tab. 61); and sample I17612 (female), from the mandible of an individual aged over 30 years (2584; 682, P7A-17699) in settlement pit 682 (Pleinerová 2002, 68).

Source of samples: National Museum, Prague

Authors of entry: Miroslav Dobeš, Michal Ernée, Petr Velemínský and Miluše Dobisíková

References:

Dobisíková, M., Velemínský, P., Pleinerová, I. and Likovský, J. 2003. Mass pit graves from Knovíz Culture (Hostivice- Palouky, Czech Republic). *Slovenská Antrópologia* 6 (n.s.1): 19–25.

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Pleinerová, I. 2003b. Hostivice, okr. *Praha-západ*, *Výzkumy v Čechách* 2001: 76.

Pleinerová, I. 2004. Die jungbronzezeitliche Siedlung von Hostivice bei Prag, ihre Struktur und Sondererscheinungen, in M. Chytráček, J. Michálek, J. and K. Schmotz (eds), *Archäologische Arbeitsgemeinschaft Ostbayern/West- und Südböhmen. 13. Treffen 25. bis 27. Juni 2003 in Pfreimd*, 225–232. Rahden: Westf. Leidorf.

Pleinerová, I. 2006. Hostivice, okr. *Praha-západ*, *Výzkumy v Čechách* 2003: 82.

Pleinerová, I. 2009a. Hostivice-Palouky (okr. Praha-západ) v době únětické kultury. *Archeologie ve středních Čechách* 13: 197–212.

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Sankot, P. and Košta, J. 2004a. *Dokument C-TX-200607772*. Unpublished report, Muzeum Roztoky. <https://digiarchiv.aiscr.cz/id/C-TX-200607772>.

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Hostivice-Sadová, Prague-West district, Central Bohemia, Czech Republic

Rescue excavations of a 7ha area by I. Pleinerová, J. Klementová and J. Hložek (Roztoky Museum) in advance of a housing development at Sadová in 2004 yielded 455 large features and c. 1600 postholes spanning the Neolithic to the Iron Age (Linear Pottery, Funnel Beaker, Řivnáč, Únětice and Late Hallstatt cultures). Human remains were found in sunken features of the Linear Pottery (features 273, 343 and 439), Funnel Beaker (1 burial), Únětice (more than

20 graves) and Hallstatt (1 grave) periods. The site is not yet fully published but a short finds report (Pleinerová et al. 2008) and summary (Pleinerová et al. 2005) is available.

Petrous bones from inhumation burials in two Linear Pottery settlement features (c. 5500–5000 BCE) were analysed for aDNA. An individual aged 16–19 years (HOST_273; P7A-18522) from settlement feature 273 (Pleinerová et al. 2005; 2008, 12, tab. T/A-13) yielded sample I7952 (male); while an individual aged 12–15 years (HOST_20; P7A-18516), buried in a grave pit (20) dug into the base of settlement feature 343 (Pleinerová et al. 2005; 2008, 13, tab. T/A-17) yielded sample I7951 (female).

Source of samples: National Museum, Prague

Authors of entry: Miroslav Dobeš and Petr Velemínský

References:

Pleinerová, I., Klementová, J. and Hložek, J. 2008. *Dokument C-TX-200802472*. Unpublished report, Muzeum Rožtoky. <https://digiarchiv.aiscr.cz/id/C-TX-200802472>.

Pleinerová, I., Klementová, J., Hložek, J. and Daněček, D. 2005. Záchranný archeologický výzkum v lokalitě Sadová I.+II., Hostivice, k. ú. Hostivice, in *Archeologické výzkumy v Čechách 2004. Sborník referátů z informačního kolokvia*, 5–6. Praha: Zprávy České archeologické společnosti supplément 60.

Hrbovice, Ústí nad Labem district, North-West Bohemia, Czech Republic

Rescue excavation of a pipeline trench in 1980 by M. Cvrková (Ústí nad Labem Museum) unearthed part of a round (settlement?) feature, the southern half of which had been removed by mechanical excavator. In the remaining part of the feature, roughly in the centre, a concentration of human skeletal remains was documented (Cvrková 1987). These included a skull, and the bones of at least one more individual, together with the skull and forequarters of a horse. Atypical pot sherds and chipped stone tools probably represent intrusions from the adjacent Neolithic settlement (Zápotocká and Muška 2007).

A petrous, likely from the aforementioned skull (Individual B; P7A-38351), from an individual aged 30–40 years, yielded sample I7953 (female).

Source of sample: National Museum, Prague

Authors of entry: Miroslav Dobeš and Petr Velemínský

References:

Cvrková, M. 1987. Hrbovice, o. Chabařovice, okr. Ústí nad Labem, *Výzkumy v Čechách 1984–1985*: 247.

Zápotocká, M. and Muška, J. 2007. *Hrbovice, okres Ústí nad Labem. Výzkum 1978: Sidelní areál kultury s keramikou lineární a vypíchanou. Hrbovice, Kreis Ústí nad Labem/Ausgrabung 1978: ein Siedlungsareal mit der Linear- und Stichbandkeramik*. Praha: Archeologický ústav AV ČR.

Konobříž, Most district, North-West Bohemia, Czech Republic

An extensive excavation undertaken in 1969–70 by D. Koutecký of the Institute of Archaeology in Prague (Most branch) in advance work at the Ležáky mine, investigated around 80 Tumulus and Knovíy culture pits over an area of several hectares, nineteen of which pits yielded human bone (Bouzek and Koutecký 1980, 360–85; Koutecký 1990, 179–80). Two Corded Ware culture burials were also present (Koutecký and Muška 1979, 10–12, figs. 6–7).

Eight samples were successfully analysed for aDNA.

Two individuals were sampled from settlement pit 1/70, dating to Middle Bronze Age Tumulus culture stage C (c. 1500–1250 BCE). According to the primary description, this feature contained only one skeleton, interred on its right side (Bouzek and Koutecký 1980, 361, fig. 2A) but anthropological analysis has identified the remains of a further three individuals. One of the two sampled skeletons clearly represents the flexed burial described, though it is not possible to define which one. A tooth from Burial A (bag 83), representing an individual aged 18–25 years (83, P7A-36415 (2860)), yielded sample I17670 (indeterminate sex); while a petrous bone from Burial B (bag 81), representing an individual aged 35–60 years (81, P7A-36416 (2340)), yielded sample I16112 (female).

Three further individuals were sampled from settlement pit 6/70, recovered in different configurations and depths of deposition (Bouzek and Koutecký 1980, 361, 364, fig. 3) and also dated to Middle Bronze Age Tumulus culture stage C (c. 1500–1250 BCE). A petrous bone from Skeleton I (192, P7A-36419 (2288)), an individual aged 35–60 years interred on their right side at a depth of just 8cm from the pit surface, yielded sample I16099 (male); a petrous bone from Skeleton II (193, P7A-36420 (2289)), a child aged 8–10 years lying supine, at a depth of 6–14 cm beneath the pit surface, yielded sample I16100 (male); and a petrous bone from Skeleton III (194, P7A-36421 (2339)), another child aged 8–10 years and interred at a depth of 30cm from the base of the feature, yielded sample I16111 (female).

Three additional samples were also taken. The first two derive from Knovíz culture pits dating to c. 1300–800 BCE: a petrous bone from a child aged 5–7 years (76/70, P7A-36426 (867)), recovered in non-anatomical position from settlement pit 76/70 (Bouzek and Koutecký 1980, 381, fig. 21A), yielding sample I13795 (male); and a tooth from an individual aged 20–40 years (77/70, P7A-36401 (2861)) in settlement pit 77/70 (Bouzek and Koutecký 1980, 381, fig. 21B, 22–24A), yielding sample I17671 (female). The third is a petrous bone from the remains of an individual aged 35–50 years (bag 44, P7A-36389 (2341)), which were obtained by D. Koutecký of the Institute of Archaeology in Prague (Most branch) in June 1971, from a worker who found them during excavator work at the edge of the mine, and which yielded sample I16113 (female). Fragments of an iron sword (?) delivered with the bones may indicate a La Tène or later date.

Source of sample: National Museum, Prague

Authors of entry: Jan Blažek and Petr Velemínský

References:

Bouzek, J. and Koutecký, D. 1980. Mohylové a knovízské kostrové „pohřby“ v jamách ze severozápadních Čech/Skelettbestattungen in Gruben der Knovízer und Hügelgräberkultur aus Nordwestböhmen. *Památky archeologické* 71: 360–432.

Koutecký, D. 1971. *Dokument C-TX-197102934*. Unpublished report, Archeologický ústav Most [zaniklé]. <https://digiarchiv.aiscr.cz/id/C-TX-197102934>.

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Kralice na Hané, Prostějov district, North Moravia, Czech Republic

Rescue excavations of 11 ha in an industrial area at 'Kralický háj', undertaken in 2002–6 by M. Šmíd (Institute for Archaeological Heritage, Brno) yielded (amongst other things) a Linear Pottery culture settlement and associated cemetery c. 5500–5000 BCE), of which 8 inhumation burials and 69 cremation burials were investigated (Šmíd 2012).

A petrous bone from an adult individual (1647; 40, P7A-42049) in inhumation grave 40 (Šmíd 2012, 38, fig. 34), accompanied with ceramic vessels and a grindstone fragment, yielded sample I15819 (female).

Source of sample: National Museum, Prague

Authors of entry: Miroslav Dobeš and Petr Velemínský

Reference: Šmíd, M. 2012. *Kostrové a žárové pohřebiště kultury s lineární keramikou v Kralicích na Hané, střední Morava/Birituelles Gräberfeld der Kultur mit Linearkeramik in Kralice na Hané*. Brno: Pravěk, supplementum 25.

Lovosice, Litoměřice district, North-West Bohemia, Czech Republic

Two excavations were undertaken in the second half of the twentieth century at the garage of a transportation company: the first when the garage was built in 1956, where (in addition to features from the Bell Beaker and Únětice cultures) four Bylany culture graves were investigated (see Pleiner 1959); and the second in 1989 during excavations for waste water pipes, which revealed two Bylany culture graves (Koutecký 1991) and three Migration Period graves (Blažek and Kotyza 1991).

Four samples, two each from Bylany culture graves (c. 800–550 BCE) excavated in 1956 and 1989, were successfully analysed for aDNA.

From the 1956 excavations:

- a petrous bone from an individual aged over 40 years in grave 01/56 (2284; 1, P7A-31688), accompanied by eight ceramic vessels, a bronze torc, two bronze bracelets and two bronze anklets (Pleiner 1959, 654, fig. 258:4), yielded sample I14980 (female).
- a metatarsal from the partial (foot only) remains of an adult in grave 02/56 (2841; P7A-31689), accompanied by eighteen ceramic vessels, two horse harnesses (including iron bit and bronze cheek-pieces), an iron knife and the remains of a pig (Pleiner 1959, 655, fig. 247, 254, 255 and 258:5), yielded sample I17312 (male).

From the 1989 excavations:

- a petrous bone from an adolescent aged 12–16 years in grave 02/89 (2286; 2/89, P7A-14343), accompanied by ten ceramic vessels, a bronze torc, a bronze bracelet and an iron knife (Koutecký 1991, 1), yielded sample I14982 (female)
- a petrous bone from an adolescent aged ?14–18 years in grave 04/89 (2287; 4/89, P7A-14345), accompanied by ten ceramic vessels, an iron spear, two bronze buttons and a bronze ring (Koutecký 1991, 1–3), yielded sample I14983 (male)

The individuals yielding samples I17312 (1956 excavations) and I14983 (1989 excavations) are second or third degree relatives.

Source of sample: National Museum, Prague

Authors of entry: Michal Ernée and Petr Velemínský

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Mužský-Hrada (Hrada site, Dneboh cadastre), Mladá Boleslav district, North Bohemia, Czech Republic

Excavation undertaken on the tabular hill ‘Hrada’ in 1953–9 by E. Pleslová-Štiková (Institute of Archaeology Prague) uncovered the remains of a multi-period settlement containing features from Neolithic to the Early Middle Ages, including six complete burials and partial human bodies most probably dating to the Neolithic (c. 5500–5000 BCE; see Zápotocká 1998, 180–1). The excavation appears in popular monograph form (Pleslová-Štiková 1981) but has yet to be published in detail.

A petrous bone from the inhumation of a child aged 2–3 years (1766; 15/58, P7A-32256) in settlement feature 403 (Zápotocká 1998, 180, tab. 6) yielded sample I15648 (male).

Source of sample: National Museum, Prague

Authors of entry: Miroslav Dobeš and Petr Velemínský

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Plzeň-Křimice, Plzeň-City District, W Bohemia, Czech Republic

Rescue excavations at the ‘Za humny’ site, undertaken in 1998 by M. Metlička (West Bohemian Museum in Plzeň) in advance of the construction of a warehouse by Trolli Bohemia, investigated 1015 sunken features dating to the Linear Pottery culture (c. 5500–5000 BCE) over an area of 0.76 ha, including four graves (the findings have so far only been published in summary form; Metlička 1999).

The petrous bone of an adolescent aged 12–18 years (1649; grave III, obj. 585, 288/98; P7A-16552) yielded sample I15821 (female).

Source of sample: National Museum, Prague

Authors of entry: Milan Metlička, Miroslav Dobeš and Petr Velemínský

Reference: Metlička, M. 1999. Záchraný výzkum sídelního areálu kultury s lineární keramikou v Křimicích (okr. Plzeň-město), in *Archeologické výzkumy v Čechách 1998. Sborník referátů z informačního kolokvia*, 9–10. Praha: Zprávy České archeologické společnosti supplément 38.

Poláky, Chomutov district, North-West Bohemia, Czech Republic

Rescue excavations of a 10ha area undertaken in 1974 and 1980–1 by Z. Smrž and D. Koutecký (Institute of Archaeology Prague, Most branch), in advance of the construction of cowsheds, unearthed 34 inhumation and 40 cremation Bylany culture burials dating to the Hallstatt period (c. 800–550 BCE; Koutecký and Smrž 1991; Koutecký 1993; Chochol 1991), as well as 21 Corded Ware graves (currently unpublished) and 3 Migration Period graves (Smrž 1979).

Petrous bones from four individuals from the Bylany culture burials were successfully analysed for aDNA:

- an individual aged 18–25 years in grave 06/74 (B9) (2098; B9, P7A-37512; Chochol 1991, 225), accompanied by nine ceramic vessels, a clay disc, an iron needle, fragments of a possible iron bracelet and two bronze rings (Koutecký and Smrž 1991, 180, fig. 11A and 32:1), yielded sample I15071 (male).
- an individual aged 35–60 years in grave 11/74 (C2) (2100; C2, P7A-37517; Chochol 1991, 225), accompanied by fourteen ceramic vessels (Koutecký and Smrž 1991, 183–5, fig. 14A and 33:2), yielded sample I16087 (male).
- an individual aged 20–35 years in grave 2/80 (2101; Obj. 2, P7A-38087), accompanied by nine ceramic vessels, a bronze torc, an iron knife and an iron ring (Koutecký 1993, 9, fig. 24B), yielded sample I16088 (female).

The individuals represented by samples I16087 and I16088 are first degree relatives, whilst the individual represented by sample I15071 is a second or third degree relative of individual I16088

The fourth petrous bone derives from an individual aged 25–40 years in grave 13/74 (A4) (2097; A4, P7A-37503; Chochol 1991, 225), accompanied by twenty ceramic vessels, a bronze bit, a bronze toiletry set (tweezers, ring and various rods), a bronze bracelet, ten bronze fittings, three bronze rings, two iron rings, an iron knife, a rectangular iron object and an amber bead (Koutecký and Smrž 1991, 185–9, fig. 15 and 26F), and yielded sample I16086 (male).

Source of sample: National Museum, Prague

Authors of entry: Michal Ernée and Petr Velemínský

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Koutecký, D. 1993. Das Bylaner Gräberfeld in Poláky, Kr. Chomutov, II. Teil/Bylanské pohřebiště v Polákách, okr. Chomutov, II. díl. *Památky Archeologické* 84: 5–55.

Koutecký, D. and Smrž, Z. 1991. Pohřebiště bylanské kultury v Polákách, okr. Chomutov, I. Díl/Das Bylaner Gräberfeld in Poláky, Kr. Chomutov, I. Teil. *Památky Archeologické* 82: 166–223.

Smrž, Z. 1979. Dva hroby z doby stěhování národů z Poláků u Kadaně (okr. Chomutov)/Two graves of the Migration Period from Poláky near Kadaň. *Archeologické Rozhledy* 31: 610–13.

Prague-Jinonice (Holman's Garden Centre), Prague 5 district, Central Bohemia, Czech Republic

Rescue excavations by the City of Prague Museum on the former site of Holman's Garden Centre, during construction of the Prague metro in 1984–6, yielded a multi-period funerary site yielding graves from the Neolithic, Eneolithic, Early Bronze Age (Únětice culture) and La Tène period. The site is located in the south-western part of Prague at an altitude of about 320m asl, in the so-called Prague Barrandien Basin (Prague Plateau). The site contained: a few graves dating to the Neolithic (three Stroked Pottery inhumation graves with five burials, Petriščáková et al. 2016, graves 52, 70, 75) and Eneolithic (graves 66, 87 and 92; unpublished); a partial cemetery of the early Únětice culture, containing 29 graves and the skeletal remains of 41 individuals; and a total of around 55 La Tène graves (c. fourth–third centuries BCE; La Tène B1b–La Tène C1b) containing the skeletal remains of 65 individuals. The La Tène grave pits were generally rectangular with frequent rounding of the corners. The inhumation burials were predominantly supine, most often with the head towards the north-north-east, north or north-east. Preservation of the skeletal remains was generally poor.

Only the anthropological analyses of the excavated skeletal remains have been fully published (Velemínský and Dobisíková 1998), with the Únětice culture finds mentioned elsewhere (Smejtek 2005, 436). A monograph is, however, in preparation for the Únětice culture remains (K. Petriščáková) and those from the La Tène period (Kovařík and Sankot in press).

Fifty samples, forty-eight of which were successfully analysed for aDNA, were obtained for this study, complementing data from nine samples from the same site published in Olalde et al. 2018.

Neolithic

A petrous bone from an individual aged 30–40 years in double-grave 70 (1181; 70A, P7A-16070), accompanied by a cup, a bowl, two chipped stone blades, two chipped stone flakes and a bone pin fragment (which may be intrusive) (Velemínský and Dobisíková 1998, 237, 261, 263), yielded sample I14190 (male). There is no direct date on this sample, but sample I7197 from grave 77 (reported in Olalde et al. 2018) is a second or third degree relative of this individual and dates to 5660±25 BP (PSUAMS-4344; 4546–4451 cal BCE).

Eneolithic

Two petrous bones from Eneolithic graves yielded the following samples:

- an individual aged over 20 years in grave 66 (1651; 66, P7A-16044, s. 609; acq. no. P7p-4/95), accompanied by a jug, a cup and two chipped stone arrowheads (Velemínský and Dobisíková 1998, 260), yielded sample I15823 (male), dating to c. 3800–3400 BCE).
- an individual aged over 30 years in grave 92 (1654; 92, P7A-16049, s. 789; Velemínský and Dobisíková 1998, 267) yielded sample I15826 (male), dating to 3634–3382 cal BCE (4750±25 BP; PSUAMS-8271).

Early Bronze Age (Únětice Culture)

Thirteen petrous bones and a tooth from Early Bronze Age Únětice culture graves (c. 2200–1600 BCE) were sampled. The petrous bones derived from:

- an individual aged 20–30 years in grave 75 (1652; 75, P7A-16072, s. 639; acq. no. P7p-4/95), accompanied by a beaker, a stone battle axe, a stone flat axe and two chipped stone flakes (Velemínský and Dobisíková 1998, 237, 262–3; Petriščáková et al. 2016, 340–42, fig. 6 and 8:1–2), yielding sample I15824 (female). This individual is a second or third degree relative of sample I7202 reported in Olalde et al. 2018.

- an individual aged 30–40 years in grave 87 (5; 87, P7A-16084; Velemínský and Dobisíková 1998, 237, 266), yielding sample I11159 (female).
- an individual aged 35–60 years in grave 1 (6; 1, P7A-16050), accompanied by fragments of two ceramic vessels and six chipped stone flakes (Petrišćáková 2009, fig. 1, tab. 1; Petrišćáková 2011, fig. 60; Velemínský and Dobisíková 1998, 237, 246), yielding sample I11160 (male).
- the disturbed burial of individual aged 30–40 years in grave 2 (1176; 2, P7A-16051, bag 33, acq. no. P7p-4/95), accompanied by fragments of a jug and another ceramic vessel (Petrišćáková 2009, fig. 2, tab. 2; Petrišćáková 2011, fig. 60; Velemínský and Dobisíková 1998, 237, 246), yielding sample I14185 (male).

The individuals represented by samples I11160 and I14185 have a sibling relationship and are therefore brothers. The data have been merged under sample I14185 for the purposes of analysis.

Petrous bones from three individuals accompanied by a pot, three cups, two bowls, two bronze hair rings, two chipped stone arrowheads and four boar tusks were sampled from grave 28 (Petrišćáková 2009, fig. 4–7, tab. 5; Petrišćáková 2011, fig. 62; Velemínský/Dobisíková 1998, 237, 251):

- the disturbed skeleton of a child aged 5–7 years (Skeleton A; 1179; 28 A, P7A-16054, bag 377, acq. no. P7p-4/95) yielded sample I14188 (male).
- the disturbed skeleton of a child aged 2–3 years (Skeleton B; 1185; 28 B, P7A-16054, bag 378, acq. no. P7p-4/95; note: possible confusion with 1186) yielded sample I14585 (female).
- the disturbed skeleton of an individual aged 18–25 years (Skeleton D; 1182; 28 D, P7A-16053, bag 380, acq. no. P7p-4/94) yielded sample I14191 (male).

The individuals represented by samples I14188 and I14585 have a sibling relationship. The data are being merged under sample I14188 for the purposes of analysis.

Petrous bones were also taken from:

- an individual aged 30–40 years in grave 83 (1184; 83, P7A-16076, bag 725), accompanied by a ceramic bowl and fragments of another vessel (Petrišćáková 2009, fig. 24, tab. 23; Petrišćáková 2011, fig. 69; Velemínský and Dobisíková 1998, 237, 264), yielding sample I14193 (male).
- an adolescent aged 14–18 years (2; Gr. 86 K, P7A-16083) and accompanied by an amphora, two bowls, two cups and fragments of two other vessels in grave 86, which included four inhumations (Petrišćáková 2009, fig. 28–31, tab. 26–7; Petrišćáková 2011, fig. 70–71; Velemínský and Dobisíková 1998, 237, 265–6), yielding sample I11158 (male).
- a child aged 6–7 years in grave 32 (1653; 32, P7A-16059, bag 374; acq. no. P7p-4/95. NM), also accompanied by a ceramic bowl and fragments of another vessel (Petrišćáková 2009, fig. 12, tab. 9; Petrišćáková 2011, fig. 64; Velemínský and Dobisíková 1998, 237, 252), yielding sample I15825 (female).

The individuals represented by samples I14193 and I11158 are father and son. The mother of I11158 is represented by sample I7198, dating to 3685±25 BP (PSUAMS-3885; 2189–1978 cal BCE), published in Olalde et al. 2018. The individual represented by sample I15825 has a second or third degree relationship with the nuclear (i.e. father and son) family represented by samples I14193 and I11158.

Two further petrous bones derived from:

- an individual aged 30–40 years in grave 31 (1177; 31, P7A-16058, bag 389, acq. no. P7p-4/94), accompanied by a small pot (Petrišćáková 2009, fig. 11, tab. 8; Petrišćáková 2011, fig. 63; Velemínský and Dobisíková 1998, 237, 252), yielding sample I14186 (female).
- the disturbed skeleton of a child aged 7–9 years (Skeleton A; 1183; 69 A, P7A-16067, bag 628/9; acq. no P7p-4/95) accompanied by a ceramic vessel, a chipped stone flake and a stone pendant, in grave 69, which contained a total of three inhumations (Petrišćáková 2009, fig. 19, tab. 17; Petrišćáková 2011, fig. 67; Velemínský and Dobisíková 1998, 237, 260–1), yielding sample I14192 (male).

A final petrous bone was taken from an individual aged 25–35 years in grave 52 (1180; 52, P7A-16060, s. 478, acq. no. P7p-4/95), accompanied by two ceramic vessels and a chipped stone blade (Velemínský and Dobisíková 1998, 237, 257; Petrišćáková et al. 2016, 339–40, fig. 3), which yielded sample I14189 (male). It has been dated to the Únětice Culture on genetic grounds.

The tooth derived from an adolescent aged 14–18 years in grave 24 (24, P7A-16163 (P6565); Petrišćáková 2009, tab. 4; Petrišćáková 2011, fig. 61; Velemínský and Dobisíková 1998, 250), yielding sample I20507 (male).

Iron Age (La Tène)

Thirty-one samples (19 petrous bones and 12 teeth) from individuals from the La Tène cemetery (c. fourth–third centuries BCE; La Tène B1b–La Tène C1b; see Velemínský and Dobisíková 1998; Kovařík and Sankot in press) were successfully analysed for aDNA.

A petrous bone from an individual aged over 17 years in double-grave 48 (Skeleton 48A; 2912; 48, P7A-16136), which contained fragments of an iron fibula, yielded sample I17321 (female); a tooth from the other individual in this grave, aged 18–25 years (Skeleton 48B; P6570; 48, P7A-16137) failed analysis.

Samples were also taken from the following individuals:

- a petrous bone from a child aged 4–6 years in grave 20 (2906; 20, P7A-16115), accompanied by fragments of three iron fibulae and a sapropelite (oil shale) bracelet, yielding sample I17315 (female)
- a tooth from a possible adult in grave 57 (P6635; 57, P7A-16143), accompanied by two bronze bracelets, an iron bracelet, and three bronze fibulae, yielding sample I20523 (female)

The individuals represented by samples I17315 and I20523 are second or third degree relatives

Further samples were taken from the following individuals:

- a petrous bone from an individual aged 35–60 years in grave 73 (2916; 73, P7A-16153), accompanied by fragments of two iron fibulae and a sapropelite (oil shale) bracelet, yielding sample I17325 (male)
- a tooth from an individual aged 18–30 years in grave 15 (URM1; 15, P7A-16109), accompanied by a fragment of iron fibula and fragments of iron bracelets, yielding sample I20504 (male)
- a tooth from an individual aged 15–40 years in grave 44 (P6634; 44, P7A-16132), accompanied by a bronze fibula, fragments of an iron fibula, two bronze bracelets and a sapropelite (oil shale) bracelet, yielded sample I20522 (male)

- a tooth from an individual aged 30–50 years in grave 3 (P6631; 3, P7A-16197), accompanied ‘warrior’ style grave goods including an iron sword, an iron spear tip, two hollow iron rings and two iron fibulae, yielding sample I20519 (male)

The individuals represented by samples I17325 and I20504 are first degree relatives. The individual represented by sample I20522 is a second or third degree relative of individuals I17325, I20504 and I20519.

The remaining petrous bones derived from the following:

- a mature adult aged over 50 years in grave 6 (2904; 6, P7A-16100), accompanied by two bronze anklets, two bronze bracelets, an iron ring and three iron fibulae, yielding sample I17313 (female)
- an individual aged 30–50 years in grave 7 (2905; 7, P7A-16101), accompanied by ‘warrior’ style grave goods including an iron sword, an iron spear tip, and iron spike, iron shield fittings and an iron bracelet, yielding sample I17314 (male)
- an individual aged 25–40 years from double-grave 13 (Skeleton 13A; 846; 13A, P7A-16106), yielding sample I13780 (male)
- an individual aged 30–50 years from grave 18 (1970; 18, P7A-16113), wearing an iron fibula, yielding sample I16269 (male)
- an individual aged 20–35 years from grave 21 (2907; 21, P7A-16116), accompanied by ‘warrior’ style grave goods including an iron sword, iron rivets from a sword hilt, two fragments of iron shield boss, fragments of an iron spear tip and spear butt, an iron fibula and an iron belt, yielding sample I17316 (female)
- an individual aged 30–50 years from grave 22 (1971; 22, P7A-16117), accompanied by a bronze bracelet, a bronze finger ring, an iron nail, two iron fragments and fragments of a ceramic vessel, yielding sample I16270 (female)
- a mature adult aged over 50 years from grave 26 (2908; 26, P7A-16118), accompanied by ‘warrior’ style grave goods including an iron sword, fragments of an iron shield, an iron spear tip, three iron rings, fragments of three iron fibulae and an arch-shaped iron object, yielding sample I17317 (male)
- an individual aged 30–50 years in grave 47 (2911; 47, P7A-16135), accompanied with fragments of iron fibula, yielding sample I17320 (male)
- an individual aged 20–35 years in grave 49 (1972; 49, P7A-16138), accompanied by fragments of two iron fibulae, yielding sample I16271 (female)
- an individual aged 30–50 years in grave 58 (2913; 58, P7A-16144), accompanied by an iron bracelet, a bronze bracelet, two bronze anklets, fragment of an iron fibula, a fragment of twisted iron belt and a bronze ring, yielding sample I17322 (female)
- a child aged 4–7 years in grave 60 (2914; 60, P7A-16145), accompanied by iron fibula fragments, yielding sample I17323 (male)
- an individual aged 35–60 years in grave 64 (2915; 64, P7A-16150), accompanied by fragments of two iron fibulae, yielding sample I17324 (male)
- an individual aged 30–50 years in grave 71 (1969; 71, P7A-16151), wearing a sapropelite (oil shale) bracelet, yielding sample I16268 (female)
- an individual aged 30–50 years in grave 78 (1973; 78, P7A-16157), yielding sample I16272 (male)
- an individual aged 35–60 years in grave 89 (2918; 89, P7A-16160), accompanied by iron fibula fragments and an iron bracelet, yielding sample I17327 (male)

The remaining teeth derived from the following:

- an individual aged 20–35 years in grave 17 (P6563; 17, P7A-16112), which also included part of a ceramic vessel, yielding sample I20505 (female)

- an individual aged 20–40 years in grave 34 (P6632; 34, P7A-16121), accompanied with ‘warrior’ style grave goods including an iron sword, iron shield fittings and shield boss, an iron spear tip and spear butt, fragments of an iron fibula, and fragments of an iron belt, yielding sample I20520 (male)
- an individual aged 20–40 years in grave 37 (P6561; 37, P7A-16125), accompanied by a large bronze fibula, two paired bronze fibulae, a bronze bracelet, a bronze lid bracelet, a sapropelite (oil shale) arm-ring, a bronze anklet, fragments of an iron rolled bracelet and two large iron fibulae, yielding sample I20503 (male)
- an individual aged 20–35 years in grave 39 (P6633; 39, P7A-16127), accompanied by a bronze anklet, a bronze bracelet and possible fragments of iron fibulae, yielding sample I20521 (female)
- an individual aged 30–50 years in grave 42 (P6567; 42, P7A-16130), wearing an iron arm-ring, yielding sample I20509 (male)
- an individual aged 20–35 years in grave 43 (P6568; 43, P7A-16131), accompanied by fragments of a metal belt, yielded sample I20510 (female)
- an individual aged 20–35 years in grave 45 (P6569; 45, P7A-16133), yielding sample I20511 (female)
- an individual aged 30–50 years in grave 72 (P6571; 72, P7A-16152), accompanied with two bronze anklets, two bronze fibulae, fragments of two iron fibulae, an iron bracelet, and a metal belt, yielded sample I20513 (female)

Finally, the petrous bone of an individual aged 35–60 years in grave 2 (P6566; 1974, 2, s.No.188, P7A-16164) yielded sample I16273 (male). This individual was located in the La Tène cemetery described above, but dates to 2085±20 BP (PSUAMS-9715; 166–44 cal BCE), i.e. LTC2–D2; see Velemínský and Dobisíková 1998; Kovařík and Sankot in press).

A further tooth was taken from an individual aged 25–35 years in grave 79 (P6636; 79, P7A-16158), accompanied with a torc, two bronze bracelets, four bronze anklets, a bronze fibula and a ceramic vessel, failed analysis.

Source of sample: National Museum, Prague

Authors of entry: Katarína Petriščáková, Miroslav Dobeš, Pavel Sankot and Petr Velemínský
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Prague-Ruzyně, Prague 6 district, Central Bohemia, Czech Republic

Rescue excavation undertaken in 1982 by J. Kovářík (City of Prague Museum) during construction of the Jiviny conduit regulator north of Unhošťská ul. in Prague-Ruzyně (parcel no. 1226/6, Ruzyně cadastral district) revealed a multiperiod site yielding c. 27 Neolithic and c. 35 La Tène settlement features, one Neolithic inhumation grave and a La Tène inhumation cemetery of 48 graves (not yet fully published).

A petrous bone from an infant aged under 6 months (2107; 7f-g, P7A-14437), found in non-anatomical position in a settlement pit (Feature No. 7 a-g) and accompanied with ceramic fragments, spindle whorls, bone tools, a quernstone, fragments of bronze and iron items, yielded sample I16090 (female); artefacts date this deposit to the La Tène period.

Source of sample: National Museum, Prague

Authors of entry: Miroslava Šmolíková and Zdeněk Vytlačil

Reference: Kovářík, J. 1985. Praha 6 – Ruzyně. *Výzkumy v Čechách 1982–1983*: 145.

Prague-Stodůlky (Malá Ohrada site), Prague 5 district, Central Bohemia, Czech Republic

Rescue excavation during construction of the 1.5ha ‘Lužiny’ prefab housing estate by J. Kovářík in 1979–80 revealed more than 500 settlement features from the Funnel Beaker culture, Late and Final Bronze Ages, Hallstatt period and Roman Iron Age. A series of burials from a number of different periods were also excavated, belonging to the Jordanów culture (one grave; Petrišćáková et al. 2016), the Corded Ware culture (four graves, Buchvaldek and Kovářík 1993), the Bell Beaker culture (one grave; Olalde et al. 2018), the Únětice culture, and the Early Middle Ages. The Únětice culture finds have not yet been published in detail and are only mentioned elsewhere (Smejtek 2005, 451), though a full site monograph is in preparation (K. Petrišćáková).

Nineteen petrous bones were successfully analysed for aDNA: one from a Neolithic Corded Ware grave, one from a Funnel Beaker culture grave, and 17 from Únětice culture graves.

Eneolithic

The following petrous bones were sampled from Eneolithic graves:

- an individual aged 35–50 years in Corded Ware grave 10 (770; grave 10, P7A-38757), accompanied by an amphora, two beakers, a stone flat axe, a possible copper knife, a whetstone and a chipped stone blade and flake (Buchvaldek and Kovářík 1993, 139–40, fig. 36), yielded sample I13467 (male), dating to 3987±25 BP (MAMS-44709; 2573–2463 cal BCE)
- an infant aged less than 6 months in Funnel Beaker grave 16 (2336; 16, P7A-38762), yielded sample I16108 (female), dating to c. 3800–3400 BCE.

Early Bronze Age (Únětice culture)

The following petrous bones were sampled from Únětice culture graves (c. 2200–1600 BCE):

Two skeletons, accompanied by a cup and a cobble tool, were sampled from grave 9 (Petrišćáková 2011, 59–60, fig. 10–11):

- an individual aged over 40 years (Skeleton B; PRH5_9B; P7A-38756) yielded sample I7964 (female)
- an individual aged 35–60 years (Skeleton A; PRH5_9B (“B”-mistake), first individual (A), P7A-38756) yielded sample I15645 (female)

Samples I15645 and I7964 represent genetic duplicates of one another. Since they are recorded as both deriving from *right* petrous bones, this raises the possibility that they might be identical twins, but the data have been merged under I1764 for the purposes of reporting and analysis.

- an individual aged 35–60 years in grave 5 (1761; 5, P7A-38752; Petrišćáková 2011, 57, fig. 9) yielded sample I15643 (male).
- an individual aged 16–19 years in grave 6 (1764; 6, P7A-38753; Petrišćáková 2011, 57–8, fig. 9) yielded sample I15646 (male).
- an individual aged 30–50 years in grave 23 (773; 23, P7A-38768), accompanied by a small storage vessel, a pot, a cup, a jug, a bone awl and a chipped stone flake (Petrišćáková 2011, 67–8, fig. 15), yielded sample I13470 (female).

The individuals represented by samples I13470 and I15646 have a mother-son relationship, whilst the individual represented by sample I15643 is a second or third degree relative of sample I15646.

- an individual aged 30–50 years in grave 13 (1760; 13, P7A-38760), accompanied by two ceramic bowls and jug fragments (Petrišćáková 2011, 61–2, fig. 10–11), yielded sample I15642 (female)
- an adult individual in grave 31 (PRH5_31; P7A-38775; Petrišćáková 2011, 70, fig. 18) yielded sample I7960 (male)

The individuals represented by samples I15642 and I7960 are second or third degree relatives.

- an adolescent aged 12–18 years (Individual B) in grave 21 (PRH5_21; P7A-38766) which contained three other individuals (Petrišćáková 2011, 65–6, fig. 14), yielded sample I7958 (female)
- an individual aged 30–50 years in grave 25 (2338; 25, P7A-38770; Petrišćáková 2011, 68–9, fig. 16) yielded sample I16110 (male)

The individuals represented by samples I7958 and I16110 are siblings.

The following petrous bones were also sampled:

- an individual aged 30–50 years in grave 4 (1762; 4, P7A-38751; Petrišćáková 2011, 57, fig. 9) yielded sample I15644 (female).
- an individual aged 35–60 years in grave 18 (772; 18, P7A-38763), accompanied by three bowls, a cup and three further ceramic vessels (Petrišćáková 2011, 63–4, fig. 12), yielded sample I13469 (male)
- an individual aged 16–19 years in grave 19 (774; 19, P7A-38764; Petrišćáková 2011, 64–5, fig. 13) yielded sample I13471 (male)
- an individual aged 16–19 years in grave 20 (2337; 20, P7A-38765/A; Petrišćáková 2011, 65, fig. 13) yielded sample I16109 (male)
- an individual aged 30–40 years in grave 27 (PRH5_27; P7A-38772; Petrišćáková 2011, 69, fig. 16) yielded sample I7959 (male)
- an individual aged 30–40 years in grave 35 (PRH5_35; P7A-38778), accompanied by a bowl, a jug, a pot, three chipped stone flakes and a boar's tusk (Petrišćáková 2011, 71–2, fig. 19), yielded sample I7962 (male)
- an individual aged 18–25 years in grave 37 (PRH5_37; P7A-38780), accompanied by a ceramic bowl and another pot (Petrišćáková 2011, 73, fig. 20), yielded sample I7963 (male)
- an individual aged 30–50 years in grave 40 (771; 40, P7A-38783/e), which contained three other burials and three-six ceramic vessels, together with a chipped stone flake (Petrišćáková 2011, 75–6), yielded sample I13468 (male).

Source of sample: National Museum, Prague

Authors of entry: Katarína Petrišćáková, Miroslav Dobeš, Miluše Dobisíková and Petr Velemínský

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Prague-Zličín, Prague 5 district, Central Bohemia, Czech Republic

Rescue excavations of a c. 1.2ha area undertaken in 1998 by D. Baštová and M. Šmolíková (City of Prague Museum) during construction of the Prague ring road uncovered a total of 410 features (most unpublished to date and summarised only in Lutovský and Smejtek 2005, 236, 312, 323, 347–8, 590). Knovíz culture settlement features predominated but the site also yielded a single Stroked Pottery culture settlement feature, four Funnel Beaker settlement features, and a semi-sunken Řivnáč culture building (Dobeš et al. 2016), as well as two Bell Beaker graves (Baštová et al. 2012).

Samples from three individuals dating to the Knovíz culture (c. 1300–800 BCE) were successfully analysed for aDNA. Two samples derived from skeletons lying on the base of settlement pit no. 363, with their backs to one another: a tooth from Skeleton A (western; 363A, P7A-16743 (P6629)), an individual aged 30–50 years, yielded sample I20517 (male); while a petrous from Skeleton B (eastern; 363B, P7A-16744 (2106)), an adolescent aged 15–18 years, yielded sample I16549 (male). A further tooth was taken from an individual aged 15–18 years

(353, P7A-16742 (P6628)), lying on their right side at the base of settlement pit no. 353, yielding sample I20516 (female).

Source of sample: National Museum, Prague

Authors of entry: Miroslava Šmolíková and Petr Velemínský

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Radovesice cemetery I, Teplice district, North-West Bohemia, Czech Republic

Radovesice was a village destroyed during construction of an open-cast coal mine in north-western Bohemia. Radovesice cemetery I, excavated in 1974–77, is located on the left bank of the Lukovský brook at a location called ‘Vápenka’. The burial ground lies on a slightly undulating slope between two now non-existent streams. It lies approximately 6.5km south-west of Teplice, at an altitude of 290–300m asl, at the foot of the western part of the Central Bohemian Uplands. The subsoil comprised Quaternary aeolic sediments: loess and fine-grained light-yellow sands. The cemetery yielded 37 graves: 34 inhumations and 3 cremations, dating to the La Tène B1b–B2b (C1a) phases (c. fourth–third century BCE). In total, 15 men, 11 women and 6 children were buried here, of which 4 males had warrior equipment (Waldhauser 1987; Stloukal 1987).

Eighteen samples (15 petrous bones and 3 teeth) were successfully analysed for aDNA. Absolute dates for the relative chronology are based on Waldhauser 2001, Venclová et al. 2008 and Venclová 2013.

A petrous bone from an individual aged 30–50 years in grave 13 (2500; 13, P7A-8351), accompanied by ‘warrior’ style grave goods, including an iron sword (on the right arm), an iron shield boss and fittings, an iron spear, iron belt rings and an iron fibula, yielded sample I15951 (male), dating to LTB2b (290/280–260/250 BCE). Meanwhile, a tooth from an adult in grave 25 (2588; 25/76, P7A-8361), also accompanied by ‘warrior’ style grave goods, including an iron sword with scabbard (on their right side), a boat-shaped iron shield boss, an iron spear (behind the skull), an iron belt chain, an iron brooch and a sapropelite (oil shale) arm-ring (on their left arm), yielded sample I17616 (male), dating to LTB2b (290/280–260/250 BCE). These two individuals are first degree relatives.

Petrous bones were taken from two adults in double-grave 31, accompanied by two iron fibulae, two identical bronze bracelets, bronze anklets in various states of preservation, the remains of an iron belt chain and a sapropelite (oil shale) arm-ring, and dating to LTB2b–C1 (290/280–190/180 BCE): 31A (2502; 31A, P7A-8362), yielding sample I15953 (female); and 31B (2489; 31B, P7A-8362), yielding sample I15039 (female). These individuals have a mother-daughter relationship (order unknown).

Petrous bones were also taken from an individual aged 35–50 years in grave 33 (2492; 33, P7A-8364), accompanied with ‘warrior’ style grave goods, including an iron sword in a

scabbard (right side), an iron spear (left side), an iron shield boss and fittings, an iron belt chain and an iron brooch, yielding sample I15042 (male), dating to LTB2b (290/280–260/250 BCE); and an individual aged 20–40 years in grave 20 (2501; 20/70, P7A-8357), accompanied by a rich ‘female’ grave assemblage including three bronze Münsingen- and Duchcov-type fibulae, two iron Duchcov-type fibulae, a bronze arm-ring (left hand), a bronze bracelet (right hand) and iron belt rings, yielding sample I15952 (female), dating to LTB1a–b (400/390–330/320 BCE). The individual represented by sample I15952 is a second or third degree relative of mother-daughter pair I15039-I15953 above, whilst the individual represented by sample I15042 is a second or third degree relative of I15953.

The remaining petrous bones were taken from:

- an individual aged 35–60 years in grave 1 (2499; 1, P7A-8340), which had been cut into an earlier settlement feature dating to LTA (480–400/390 BCE), yielding sample I15950 (male).
- an individual aged 35–60 years in grave 2 (2498; 2/74, P7A-8341), yielding sample I15048 (male), dating to no later than LTA (480–400/390 BCE)
- two individuals from double-grave 3, accompanied with rich ‘female’ attire, including a bronze bracelet, an iron bracelet, a bronze finger-ring, two bronze anklets and an iron Duchcov-type fibula, dating to LTB1b–c (380–330 BCE): an individual aged 35–60 years (2503; Gr. 3A, P7A-8342), yielding sample I15954 (male); and an individual aged 30–50 years (2494; Gr. 3B, P7A 8342), yielding sample I15044 (female)
- an individual aged 30–50 years in grave 14 (2496; 14/76, P7A-8352), accompanied with rich ‘female’ attire, including a bronze Duchcov-type fibula, an iron fibula, a bronze bracelet (left hand), an iron bracelet (right hand), an iron belt ring and two bronze anklets, yielding sample I15046 (female), dating to LTB1b–c (380–330 BCE)
- an individual aged 30–50 years in grave 21 (2493; 21, P7A-8358), which contained traces of a wooden casket with postholes in each corner and another in the middle of the western side of the grave pit and a rich ‘female’ grave assemblage including two small bronze fibulae, one large bronze fibula behind the skull, a sapropelite (oil shale) arm-ring with bronze repair, a bronze bracelet (right hand), and iron bracelet (left hand), an iron belt ring and two bronze anklets, yielding sample I15043 (female), LTB2a–b (330/320–260/250 BCE)
- an individual aged 30–50 years in grave 22 (2504; 22, P7A-8359), which contained traces of a wooden casket and an iron fibula, yielded sample I15049 (male), dating to LTB1–B2 (400/390–260/250 BCE)
- an individual aged 35–50 years in grave 24 (2495; 24/71, P7A-8360), accompanied by two bronze late-Münsingen-type fibulae, two identical bronze bracelets (one on each hand) and iron belt rings, yielding sample I15045 (female), dating to LTB2a (330–c. 290/280 BCE)
- an individual aged ?20–40 years in grave 35 (2490; 35/77, P7A-8366), yielding sample I15040 (male), dating to LTB–C (400/390–190/180 BCE)
- an individual aged 35–60 years in grave 36 (2497; 36, P7A-8367), accompanied by two iron fibulae, yielding sample I15047 (male), dating to LTC1 (260/250–190/180 BCE)

The remaining teeth were taken from:

- an individual aged over 40 years in grave 11 (2586; 11/76, P7A-8349), accompanied by an iron Duchcov-type fibula, a lockable needle, an iron needle and traces of possible organics, yielding sample I17614 (male), dating to LTB1b–c (380–330 BCE)
- an individual aged ?20–40 years in grave 34 (2585; 34, P7A-8365), yielding sample I17613 (male), dating to LTB–C (400/390–260/250 BCE)

Source of sample: National Museum, Prague

Authors of entry: Alžběta Danielisová and Petr Velemínský

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Radovesice cemetery II, Teplice district, North-West Bohemia, Czech Republic

Radovesice was a village destroyed during construction of an open-cast coal mine in north-western Bohemia. Radovesice cemetery II, excavated in 1981–82, is located at ‘Na vyhlídce’, north of the former village. It lies on a local ridge on a south-facing slope on the right bank of the Lukovský brook, at an altitude of 305–310m asl, and is located 950m north-east of Radovesice cemetery I. The subsoil comprised Quaternary aeolic sediments: loess and fine-grained light-yellow sands. A total of 22 graves (all inhumations) and a set of disarticulated human bones from several individuals were excavated within the cemetery, which appears to have developed gradually in rows, and dates to between the La Tène B1–B2b phases. Based on anthropological assessment and genetic results presented in this study, a total of 10 adult men were buried here, of which 5 were accompanied with ‘warrior’ style grave goods, along with 3 adult women, 3 children/adolescents (1 male, 1 female), and 7 adults of undetermined sex (Budinský and Waldhauser 2004; Le Huray and Schutkowski 2005; Velemínský et al. 2004).

Eleven samples (10 petrous bones and one tooth) were successfully analysed for aDNA. Absolute dates for the relative chronology are based on Waldhauser 2001, Venclová et al. 2008 and Venclová 2013.

The petrous bones were taken from:

- an individual aged 30–50 years in grave 9 (2748; 29830, 9/81, P7A-16377), accompanied with ‘warrior’ style grave goods, including an iron sword with scabbard (right side), an iron spear (right side) and iron shield boss and fittings, iron belt rings, a bronze bracelet (left hand) and an iron bracelet (right hand), yielding sample I17146 (male), dating to LTB2a (330–c. 290/280 BCE).
- an individual aged over 50 years in grave 19 (2342; 19/81, P7A-16364), buried with two iron fibulae (one of late-Duchcov-type) and a bronze bracelet (right hand), yielding sample I14984 (male), dating to LTB2a (330–c. 290/280 BCE).
- an individual aged 40–60 years in grave 17 (2346; 17/81, P7A-16362), yielding sample I14988 (male), dating tentatively to LTB2a (330–c. 290/280 BCE).

Petrous bones were also taken from:

- an adolescent aged 10–18 years in grave 10 (2741; 29860, 10, P7A-16308), accompanied by a rich ‘female’ assemblage of two iron fibulae, an iron arm-ring (left arm), a sapropelite (oil shale) arm-ring (lower left arm), a bronze bracelet (right hand), iron belt rings, two bronze anklets, and a clay spindle whorl, yielding sample I17139 (female), dating to LTB2b (290/280–260/250 BCE)
- an individual aged 40–60 years in grave 15 (2343; 15/81, P7A-16312), accompanied by rich ‘female’ attire, including a bronze torc, two bronze late-Duchcov-type fibulae, a late-Münsingen-type fibula, a bronze ring, a possible copper awl, two bronze bracelets, an iron belt ring and two bronze anklets, yielding sample I14985 (female), dating to LTB2a (330–c. 290/280 BCE)
- and an individual aged 20–30 years in grave 20 (2745; 20/81, P7A-16365), wearing two iron fibulae and a bronze bracelet (right hand), yielding sample I17143 (male), dating to LTB2b (290/280–260/250 BCE).

The individuals represented by samples I17139 and I17143 are second or third degree relatives, as are I17139 and I14985, and samples I17143 and I14985.

The remaining petrous bones were taken from:

- an individual aged 9–11 years in grave 6 (2747; 29738, 6/81, P7A-16374), accompanied with an iron fibula, a bronze bracelet (left hand) and an iron bracelet (right hand), yielding sample I17145 (male), dating to LTB2a (330–c. 290/280 BCE)
- an individual aged 30–50 years in grave 7 (2345; 7/81, P7A-16375), accompanied by ‘warrior’ style grave goods, including an iron sword (on the right side), an iron shield boss and fittings, an iron spear and an iron fibula, yielding sample I14987 (male), dating to LTB2a (330–c. 290/280 BCE)
- an individual aged 35–50 years, buried prone in grave 21 (2344; 21/81, P7A-16366) and accompanied by a bronze bracelet (left hand), an iron bracelet (right hand) and an iron arm-ring (left arm above the elbow), yielding sample I14986 (male), dating to LTB2a (330–c. 290/280 BCE)
- a child aged 10–12 years in grave 23 (P6630; 23/81, P7A-16368), yielding sample I20518 (male) and dating tentatively to LTB2a (330–c. 290/280 BCE)

A tooth was also taken from an individual aged 20–40 years in grave 8 (2859; 29799, 8/81, P7A-16376), buried with two bronze fibulae, three iron fibulae and an iron belt ring, yielding sample I17669 (female), dating to LTB2a (330–c. 290/280 BCE)

Source of sample: National Museum, Prague

Authors of entry: Alžběta Danielisová and Petr Velemínský

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Venclová, N. (ed.) 2013. *Prehistory of Bohemia 6. The Late Iron Age – The La Tène Period*. Prague: Institute of Archaeology CAS.

Waldhauser, J. 2001. *Encyklopedie Keltů v Čechách*. Prague: Libri Publishing.

Stradonice, Louny district, North-West Bohemia, Czech Republic

Rescue excavation conducted in 1960 by A. Beneš (Institute of Archaeology Prague, Most branch) in a c. 500m trench for water pipeline, recorded 17 features dating from the Neolithic to the La Tène period, including four inhumation burials of the Early Iron Age Bylany culture (c. 800–550 BCE) (Beneš and Koutecký 1970; Chochol 1970).

Samples from four individuals from these burials were successfully analysed for aDNA. A petrous bone from an individual aged 30–40 years in grave 5 (2114; gr. 5, P7A-32598; Chochol 1970, 540–1), accompanied by at least ten ceramic vessels, a bronze torc and a bronze ring (Beneš and Koutecký 1970, 516–519, fig. 1, 3 and 4, tab. II:1–3 and III:1), yielded sample I16329 (female). A tooth from an adult (burial 2) in double-grave 9 (2569; gr. 9, burial 2, P7A-32601; Chochol 1970, 541), accompanied by at least six ceramic vessels (Beneš and Koutecký 1970, 523, fig. 1 and 6, tab. III:3), yielded sample I17607 (male).

Petrous bones were also taken from two individuals in grave 10, which anthropological analysis has revealed contained at least five individuals (Chochol 1970, 541–3), together with at least eight ceramic vessels, fragments of a bronze vessel, a bronze bracelet, a possible bronze needle, five bronze rings, three bronze fittings, fragments of two iron fibulae and a possible iron spear (Beneš and Koutecký 1970, 523–7, fig. 1, 7 and 8, tab. I, II:5–6 and III:4–7):

- an individual aged 30–50 years (2112; gr. 10, burial 4, P7A-32605) yielded sample I16327 (male)
- an adult over 25 years (2111; gr. 10, burial ?, P7A-32607) yielded sample I16326 (female)

Source of sample: National Museum, Prague

Authors of entry: Miroslav Dobeš and Petr Velemínský

References:

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ENGLAND, UK

3 Barrow Sites, Grassington, North Yorkshire, UK

Landscape features potentially representing dozens of prehistoric settlements and monuments were identified in the Upper Wharfedale Valley in the North Yorkshire Dales during the nineteenth century. The Craven Museum in Skipton holds human remains excavated from ‘3 barrow sites near Grassington’. Any direct archival links to specific archaeological sites have

been lost, but it is highly likely that these human remains originate from three round barrows in Upper Wharfedale, near to the village of Grassington, which were largely excavated by a committee led by Ernest Edwin (E.E.) Speight in 1893–4. One of these round barrows was located on Capstick Pasture ('Capstick Pasture Barrow'), whereas the other two were on Lea Green ('Lea Green Barrows'). All three round barrows comprised cairns made of limestone blocks. The typology of the round barrows and the finds that were recovered from them suggest they were originally constructed in the Early Bronze Age (c. 2400–1600 BCE). Some of the burials were inserted at this time, although the presence of iron grave goods with some of the burials, and the positions of some of the skeletons, suggest that episodes of funerary activity at each barrow post-dated the Bronze Age.

The central interment at Capstick Pasture Barrow was excavated by Reverend B.J. Harker in 1892, prior to E.E. Speight's investigations. The body had been placed in a rectangular grave and covered with limestone blocks. The skeleton was in a flexed position on its left side with the head to the east. Some human teeth, a human femur from a second individual, a piece of worked bone, an iron knife and an iron pin were recovered from the grave fill. The remains of a second interment inserted into the cairn around 15ft east of the centre of the barrow were also recovered. The skeleton was covered by a large limestone slab. An iron nail was recovered close to the skull. Part of a probable bronze ring brooch was found closer to the centre of the cairn. Speight found 50 disarticulated human teeth just below the surface of the mound along with a scatter of burnt animal bone, charcoal, a jet or shale button/pendant and a piece of pottery with a chevron design. Disarticulated human cranial remains and phalanges were found alongside the remains of a rat 12ft to the south-east of the centre of the mound. A similar collection of disarticulated human cranial bones and phalanges were also recovered around 12ft north-west of the centre of the mound and were accompanied by a fragment of gnawed antler and part of a bone comb.

The first Lea Green round barrow was located on a natural mound on Lea Green Pasture. It was enclosed by two boulder limestone walls. The central burial contained a flexed skeleton laid on its right side with the head to the west. The burial was accompanied by a bronze awl. A second interment was found close to the surface of the mound, around 5ft north-west of the centre. The skeleton was found on its right side with the head to the west and was accompanied by a bronze ring brooch similar to that found at Capstick Pasture Barrow. Disarticulated fragments of a human skull were also recovered from beneath the outer wall and a collection of 11 disarticulated human teeth were found around 8ft east of the centre of the mound.

The second Lea Green round barrow was also constructed of limestone blocks but did not include any boulder walls. The first burial was found 7ft east of the centre of the barrow and comprised an unaccompanied extended skeleton. Extended burials are recovered from Bronze Age contexts only rarely, and it is likely that this burial represents a later episode of funerary activity at the barrow. A disarticulated deposit of seven teeth, five phalanges and several skull fragments were recovered around 6ft north-east of the centre of the mound. A second unaccompanied extended skeleton was found around 12ft south-east of the centre of the mound, placed on its left side with its head to the west. Another burial containing an articulated skeleton was found in the north-west part of the mound, inserted into the outer edge of the stone cairn. The position of this skeleton was not recorded. Another, mostly complete, unaccompanied skeleton was found 8ft south of the centre of the mound, flexed on its right side with the head to the west. Three disarticulated skull fragments, some teeth and phalanges were recovered 7ft north of the third skeleton. Some further skull fragments and phalanges were found 9ft south-

west of the first skeleton discovered. Four iron knives, a small bronze pin, part of a spiral bone pin and a bronze blade were found in other parts of the cairn.

Samples I16394 (male; A10.78 (A51.15)), I16395 (female; A10.60), I16396 (female; A10.59) and I16400 (male; A10.62) were taken from petrous temporals which formed part of the '3 Barrow Sites near Grassington' human bone assemblage in the Craven Museum, Skipton. While we can be quite sure that these samples originated from the Capstick Pasture and Lea Green round barrow sites, we are unable to relate the samples to specific barrows or individuals. It is likely that all of these samples date to the Early Bronze Age, but given the evidence for later episodes of burial, we cannot rule out the possibility that some date to later periods.

Source of sample: Rachel Terry, Craven Museum

Author of entry: Tom Booth

Reference: Speight, E.E. 1894. Upper Wharfedale Exploration Committee First Annual Report 1893. *Proceedings of the Yorkshire Geological and Polytechnic Society* 12: 374–84.

Amesbury Down, Wiltshire, England, UK

Amesbury Down comprised a rich and extensive prehistoric mortuary landscape (c. 1.15km north–south and 1km east–west) immediately east of the Stonehenge World Heritage Site. Small groups of graves or dispersed single graves lay within six topographic zones and included several extraordinarily rich burials ('Amesbury Archer', 'Companion' and 'Boscombe Bowman'). The mortuary deposits recovered included the remains of a minimum of 32 in situ inhumation burials and one partial articulated body, and six cremation burials. Other material was redeposited, accidentally or by design, in various graves and pits, and one ditch. A minimum of 57 individuals are represented in the overall assemblage (MNI): three Late Neolithic (two unburnt and one cremated), 39 Beaker–Early Bronze Age (31 unburnt and eight cremated), five Middle and one Mid–Late Bronze Age (unburnt), four Early and four Middle Iron Age (unburnt), and one unphased prehistoric (unburnt). Remains were dated on the basis of artefactual material (recovered from 17 graves) and via a substantial programme of radiocarbon analysis undertaken on 38 samples of unburnt human bone and eight of cremated bone. Mortuary activity included the use of 'communal' or 'shared' graves, grave reuse, the revisiting of graves with human manipulation of remains including curation, rearrangement, removal and replacement of skeletal elements. The small groups of Iron Age inhumation graves were found in relatively close proximity to earlier prehistoric single graves in two of the topographic zones.

Three human teeth and one long bone deriving from individuals dating to the Early Bronze Age were successfully analysed for aDNA. The teeth yielded sample I14200 (male) from individual 50875_1291 ('Archer'), dating to 3895±32 BP (OxA-13541; 2470–2239 cal BCE); sample I2565 (male) from individual 50875_1238 ('Companion'), dating to 3829±38 BP (OxA-13562; 2456–2146 cal BCE); and sample I2598 (male) from individual 56244_12134, dating to 3664±30 BP (NZA-32494; 2139–1950 cal BCE). The latter represents additional data on a sample published in Olade et al. (2018). The long bone yielded sample I2419 (female) from individual 56240_10288, dating to 3812±25 BP (NZA-32486; 2393–2144 cal BCE).

Four human teeth and one petrous bone deriving from individuals dated to the Iron Age were successfully analysed for aDNA. The petrous bone yielded sample I19287 (female) from skeleton 62020, dating to 2468±26 BP (SUERC-53039; 761–422 cal BCE). The teeth yielded sample I16600 (male), from skeleton 61409, dating to 2358±34 BP (SUERC-49184; 713–381 cal BCE); sample I16602 (female), from skeleton 62017, dating to 2415±25 BP (SUERC-

53042; 734–403 cal BCE); sample I16599 (male), from skeleton 61394, dating to 2303±34 BP (SUERC-49183; 411–208 cal BCE); and sample I16601 (female), from skeleton 61508, dating to 2111±34 BP (SUERC-49181; 343–43 cal BCE).

Source of samples: Wessex Archaeology

Author of entry: Jacqueline McKinley, Pippa Bradley and Ian Armit

References:

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ARES site, Babraham Research Campus (ARC05), Cambridgeshire, England, UK

An excavation undertaken as part of the continued expansion of the Research Campus, to the south of Cambridge, exposed the remains of riverside settlement established during the Late Iron Age/Conquest period and continuing throughout the Roman period (Armour 2007). Other potentially contemporary features excavated at the site included a short-lived rectangular building within a ditched enclosure, with a well and rubbish pits located nearby.

A phalanx from burial F.138 yielded sample I19047 (male), which did not include grave goods but which can be dated on archaeological grounds to the early–mid first century CE.

Source of samples: Cambridge Archaeological Unit

Author of entry: Jonathan Tabor

References:

Armour, N. 2007. *The ARES Site: Babraham Research Campus, Cambridgeshire. An Archaeological Excavation*. Unpublished, Cambridge Archaeological Unit Report No. 752.

Evans, C., with Mackay, D. and Webley, L. 2008. *Borderlands: The Archaeology of the Addenbrooke's Environs, South Cambridge*. CAU Landscape Archives: New Archaeologies of the Cambridge Region Series Vol. I. Cambridge: Cambridge Archaeological Unit.

Barton-Stacey Pipeline, Hampshire, England, UK

Three Middle Iron Age inhumation graves were excavated in Mitigation Area 5, during archaeological works associated with the construction of a pipeline from Barton Stacey to Lockerley in Hampshire (HMCMS:A2006.92; McKinley 2013). A human petrous bone from Skeleton 25043 was successfully analysed for aDNA, yielding sample I13717 (female), dating to 2270±30 BP (SUERC-26240; 398–208 cal BCE).

Source of sample: Wessex Archaeology

Author of entry: Ian Armit

Reference: McKinley, J.I. 2013. Human bone, in R. De'Athe, R., *Early Iron Age metalworking and Iron Age/Romano British settlement evidence along the Barton Stacey to Lockerley gas pipeline: finds and environmental reports to accompany publication text in Hampshire Studies* 68, 8–11. Wessex Archaeology: online report: https://www.wessexarch.co.uk/sites/default/files/field_file/Barton%20Stacey.pdf

Battlesbury Bowl, Wiltshire, England, UK

Battlesbury Bowl, an area of Iron Age settlement located immediately to the north of Battlesbury Camp hillfort in Wiltshire, was excavated in 1998/9 (Ellis and Powell 2008). Numerous disarticulated human remains were recovered along with six human burials in re-used storage pits. These comprised five adults and a juvenile (McKinley 2008).

Petrous bones from the five adult burials were successfully analysed for aDNA. Two individuals from Pit 4223 (Phase 3) deposits were sampled: the upper individual (4251) yielded sample I21311 (female), dating to 2112 ± 27 BP (SUERC-97432; 336–49 cal BCE) and the lower individual (4345), who appears to have had a horse mandible placed over their pelvis, yielded sample I21307 (male), dating to 2134 ± 27 BP (SUERC-97430; 346–52 cal BCE). The two burials do not appear to be contemporary.

The three individuals sampled from Phase 4 deposits included two from Pit 4272 who appear to have been buried at the same time: individual 4347 yielded sample I21309 (male), dating to 2154 ± 27 BP (SUERC-97431; 354–57 cal BCE), and individual 4346, who lay immediately below, yielded sample I21310 (female), dating to 2127 ± 85 BP (NZA-13632; 386 cal BCE–cal CE 58).

The other Phase 4 individual (4322) yielded sample I21308 (male), dating to 2083 ± 70 BP (NZA-13631; 356 cal BCE–cal CE 110); they were associated with the articulated right foot and lower leg of a separate individual.

Source of sample: Wiltshire Museum

Author of entry: Ian Armit

References:

Ellis, C. and Powell, A.B. 2008. *An Iron Age Settlement outside Battlesbury Hillfort, Warminster, and Sites along the Southern Range Road* (Wessex Archaeology Report 22). Salisbury: Wessex Archaeology.

McKinley, J.I. 2008. Human remains, in Ellis, C. and Powell, A. B. 2008. *An Iron Age Settlement outside Battlesbury Hillfort, Warminster, and Sites along the Southern Range Road* (Wessex Archaeology Report 22), 71–83. Salisbury: Wessex Archaeology.

Bevendean, Brighton, Sussex, England, UK

In 1931, workmen digging a trench by the roadside on the Bevendean Estate in Brighton uncovered a grave containing the skeleton of a male aged 25–30 years, and buried in a highly flexed position on his right side with his head to the south, facing north. No grave goods were recorded. The petrous portion of the temporal bone of this burial (R3428) yielded sample I16619 (male), which produced a Middle Iron Age date of 2173 ± 31 BP (SUERC-76361; 361–106 cal BCE).

Source of Sample: Andy Maxted, Brighton Museum

Author of entry: Tom Booth and Andy Maxted

Birkrigg Common, Ulverston, Cumbria, UK

There are various prehistoric monuments on Birkrigg Common, including a series of round barrows dating to the Chalcolithic–Early Bronze Age (c. 2450–1800 BCE) and an unusual double stone circle monument (the ‘Druid’s Circle’). The Druid’s Circle is likely to have been constructed a little earlier in the Late Neolithic but is probably continued to be a focus of activity into the Chalcolithic and Early Bronze Age. Excavations of some of these

monuments in the early twentieth century by members of the North Lonsdale Field Club uncovered a series of human burials.

The archival material accompanying the human remains sampled from Birkrigg Common for the current study was unclear regarding the specific monument with which the bones were originally associated. However, based on the elements represented, the sampled deposit most likely originated from a round barrow known as Appleby Hill, situated on the northern ridge of Birkrigg Common around 610 yards (c. 0.5km) west of the 'Druid's Circle'. The barrow was excavated in 1912 by the Reverend Charles Gelderd, James Randall and John Dobson with members of the North Lonsdale Field Club. The round barrow mound was constructed of limestone blocks covered in a thin layer of turf. The mound cairn contained thirty features comprising large limestone slabs covering deposits of black earth. The excavators speculated that these dark patches of earth may have represented partial cremation deposits. The area within the barrow containing these dark earth deposits was surrounded by a circle of inward-leaning large stones. A 'rough vaulting' of large stones was found towards the centre of the mound. These stones covered a deposit of disarticulated adult human bones comprising a portion of jaw, three teeth and a few small cranial bone fragments. The absence of any other bones indicated to the excavators that only a disarticulated skull had been deposited here originally. Further unburnt human bones were recovered from north-west of the centre of the barrow. This deposit was made up only of the small bones of the upper body; a partial jaw bone, phalanges, ribs and vertebrae. These bones were accompanied by a fusiform bronze awl and a pig's tooth. Sample I20997 (male) was taken from the petrous portion of a disarticulated temporal bone that was probably recovered as part of the remains of the skull (BAWMS 07994) deposited by itself beneath the stone 'vaulting'.

Source of sample: Sabine Skae, Dock Museum, Barrow-in-Furness

Author of entry: Tom Booth

Reference: Gelderd, C., Randall, J. and Dobson, J. 1914. Some Birkrigg Barrows.

Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society 14 (series 2): 466–79.

Blackberry Field, Potterne, Wiltshire, England, UK

The site of Blackberry Field, Potterne, Wiltshire, forms part of an extensive midden dating to the Late Bronze Age/Early Iron Age (Lawson 2000). It is one of a series of such sites that appear to relate to communal gatherings and feasting in this part of Wessex, and may represent depositional activity for up to 500 years. Radiocarbon dating of charcoal distributed through the midden produced dates from the Middle to Late Bronze Age (Lawson 2000). Disarticulated human remains (alongside large quantities of faunal remains) were recovered from midden deposits up to 2m deep, extending over an area of more than 3.5 ha (of which only around 0.75% has been subject to excavation). Recent radiocarbon dating of human bone from the earlier deposits has produced dates in the Late Bronze Age (Booth and Brück 2020); a cranial fragment dating to 2768±27 BP (BRAMS-1590; 996–837 cal BCE), a human frontal fragment dating to 2701±26 BP (BRAMS-1582; 901–809 cal BCE), a mandible fragment dating to 828±27 BP (BRAMS-1298; 1055–904 cal BCE), and a frontal bone dating to 2689±27 BP (BRAMS-1587; 900–804 cal BCE). Apart from a single burial, the assemblage is represented by disarticulated bones or bone fragments (McKinley 2000). Several of the bones from the assemblage of 139, especially skulls and long bones excavated from the same spit, represent joining fragments.

Six human teeth and one long bone fragment were successfully analysed for aDNA, while a further tooth (from SF462) failed analysis. The remaining teeth yielded sample I12608 (female; SF901), dating to 2828 ± 27 BP (BRAMS-1298; 1055–904 cal BCE); sample I12610 (male; SF1119), dating to 2475 ± 20 BP (PSUAMS-7611; 765–489 cal BCE); sample I12614 (female; 2951); sample I12611 (female; 314); sample I12612 (female; SF1921); and sample I12613 (female; 2979). The latter three samples have been excluded from the analysis due to their low coverage. The long bone, from an infant, yielded sample I12624 (female; 2747). An adult human frontal bone (818) from the same context has been radiocarbon dated to 2689 ± 27 BP (BRAMS-1587; 900–804 cal BCE).

Source of samples: Wiltshire Museum

Author of entry: Ian Armit

References:

Booth, T. J. and Brück, J. 2020. Death is not the end: radiocarbon and histo-taphonomic evidence for the curation and excarnation of human remains in Bronze Age Britain. *Antiquity* 94(377): 1186–1203.

Lawson, A. 2000. *Potterne 1982–5: Animal Husbandry in Later Prehistoric Wiltshire* (Wessex Archaeology Reports No. 17). Salisbury: Wessex Archaeology.

McKinley, J.I. 2000. Human bone, in Lawson, A., *Potterne 1982–5: Animal Husbandry in Later Prehistoric Wiltshire* (Wessex Archaeology Reports No. 17), 95–101. Salisbury: Wessex Archaeology.

Black Rock, Brighton, Sussex, England, UK

In 1931, workmen digging a sewer trench near the old Blackrock Coastguard Station in Brighton uncovered a burial containing the skeleton of a female probably aged less than 25 years. The skeleton had been buried at least three feet into the chalk and covered by a layer or cairn of flint nodules. The woman had been buried in a crouched position with her head to the south. No grave goods were reported from the site. A tooth from this skeleton (R3330) yielded sample I16617 (female), which has produced an Early Iron Age date of 2496 ± 30 BP (SUERC-70743; 777–516 cal BCE).

Source of Sample: Andy Maxted, Brighton Museum

Author of Entry: Tom Booth and Andy Maxted

Bottle Knap, Long Bredy, Dorset, England, UK

Excavations were carried out at Bottle Knap, Long Bredy, in 2019 to record a series of human remains disturbed by the digging of a pipeline trench in 2013 (Randall 2019). This work revealed that the pipeline had cut through at least three articulated inhumations, though the remains of at least one further individual were also present among the disturbed material. The articulated skeletons were all around 13–20 years at death, though the disturbed material included the remains of at least one full mature adult (ibid., 6). The human remains were reburied following examination in situ, with selected elements being lifted for scientific analysis.

Petrous bones from each of the three skeletons were successfully analysed for aDNA, yielding: sample I27381 (female), from Skeleton B, dating to 2430 ± 25 BP (SUERC-97712; 748–406 cal BCE); sample I27382 (male), from Skeleton F, dating to 2493 ± 25 BP (SUERC-97713; 774–

540 cal BCE); and sample I27383 (female), from Skeleton A, dating to 2444±25 BP (SUERC-97717; 750–411 cal BCE).

Source of sample: The National Trust

Authors of entry: Martin Papworth and Ian Armit

Reference:

Randall, C. 2019. *Bottle Knap, Long Bredy, Dorset, 2019. Human remains*. Unpublished client report.

Bradley Fen, Whittlesey, Cambridgeshire, England, UK

Two inhumations, both mature adult males, were excavated on a fen-edge settlement dating to the beginning of the Middle Iron Age. The context of the burials was a linear occupation scatter that skirted the south-eastern margins of the Flag Fen Basin, a small fen-embayment. The settlement was characterized by a swathe of roundhouses, four-post structures and watering holes. One of the burials (F.613, 331) was interred in the top of the posthole of a dismantled four-post structure, whilst the other (F.781, 445) was found prone in a shallow grave (Knight and Brudenell 2020, 303–377). As with the majority of the settlement-related features, the fills of the posthole and the shallow grave included metalworking debris.

Human petrous bones were sampled from each of two inhumation burials: Burial F.613 (cat. 331) yielded sample I11156 (male), dating to 2223±26 BP (BRAMS-1695; 382–200 cal BCE); and Burial F.781 (cat. 445) yielded sample I11997 (male), dating to 2213±26 BP (BRAMS-1691; 377–197 cal BCE).

Source of samples: Cambridge Archaeological Unit

Author of entry: Mark Knight

Reference:

Knight, M. and Brudenell, M. 2020. *Pattern and Process, Landscape Prehistories from Whittlesey Brick Pits: The King's Dyke and Bradley Fen Excavations 1998-2004*. CAU Must Farm/Flag Fen Basin Depth and Time Series Vol. I. Cambridge: McDonald Institute for Archaeological Research.

Broom Quarry, Bedfordshire, England, UK

Excavations at Broom Quarry, Bedfordshire, identified several areas of Middle Iron Age occupation. In an extensive settlement dating to 425–200 BCE, three adult crouched inhumation burials were recovered from grain storage pits (Tabor 2013; Evans et al. 2018, 295, fig. 4.85). Two human petrous bones and a tooth from these inhumations were successfully analysed for aDNA. Petrous bones from burials F. 384 (cat. no. 610, a middle adult) and F. 855 (cat no. 1858, a young adult) respectively yielded sample I11150 (male), dating to 2215±28 BP (SUERC-86441; 381–197 cal BCE), and sample I11151 (male) dating to 2214±27 BP (SUERC-97413; 379–197 cal BCE). The tooth, from burial F.897 (cat no. 1971, a younger middle adult), yielded sample I16597 (male), dating to 2288±28 BP (SUERC-86447; 404–209 cal BCE).

A short-lived settlement to the south (Tabor and Middleton 2018, 65) yielded one more crouched burial in a Middle Iron Age grain storage pit. A petrous bone from burial F. 2370 (cat no. 434; a middle adult) yielded sample I21293 (female).

Source of samples: Cambridge Archaeological Unit

Author of entry: Rob Wiseman

References:

Evans, C., Lucy, S. and Patten, R. 2018. *Riversides: Neolithic Barrows, a Beaker Grave, Iron Age and Anglo-Saxon Burials and Settlement at Trumpington, Cambridge*. CAU Landscape Archives/New Archaeologies of the Cambridge Region Series, Vol. I. Cambridge: McDonald Institute for Archaeological Research.

Tabor, J. 2013. *Archaeological Investigations at Broom Quarry, Bedfordshire, Phases 11-13*. Unpublished, Cambridge Archaeological Unit Report No. 1213.

Tabor, J. and Middleton, E. 2018. *Archaeological Investigations and Broom South Quarry, Bedfordshire: The Plant Site and Phases I and II. Volume 1: Post Excavation Assessment*. Unpublished Cambridge Archaeological Unit Report No. 1397.

Burstwick, East Riding of Yorkshire, England, UK

Excavations were undertaken in 2016–7 during replacement of a water main between Burstwick and Rimswell in the Holderness area of the East Riding of Yorkshire. A variety of sites of various periods were investigated (Turner 2018). In Area 8a(II), located between Burstwick and Halsham, two Iron Age square barrows were partially excavated. No central grave survived in the eastern enclosure, although a shallow and probably secondary inhumation was found in the north-western part of the interior. The rectangular grave contained a poorly preserved crouched skeleton 411 with its head to the south and accompanied by two iron arrowheads, a fragment of iron sheet and a small copper-alloy tack. An articulated pig vertebral column had been placed in front of the body. A tooth from Skeleton 411 failed aDNA analysis, as did two attempts at radiocarbon dating.

In the western enclosure, a central grave contained a crouched skeleton 427. This was accompanied by a bent iron sword, an iron spearhead and a shield represented by an iron boss in a circular patch of dark soil over the pelvis. This skeleton also had an articulated pig vertebral column laid in front of it. Petrous bone from skeleton 427, a young middle adult (21–38 years), provided sample I22065 (male) dated 2147±24 BP (SUERC-80670; 351–55 cal BCE).

Source of samples: Northern Archaeological Associates Ltd

Author of entry: Greg Speed

Reference:

Turner, B. 2018. *Burstwick to Rimswell Renewal, East Riding of Yorkshire. Final Report (Draft)*. Unpublished, Northern Archaeological Associates report.

Cadbury Castle, South Cadbury, Somerset, England, UK

The multivallate hillfort of South Cadbury was occupied throughout the Iron Age and abandoned probably in the second century CE (Barrett et al. 2000). There is evidence for violent conflict with the Roman army towards the end of the site's occupation. Many disarticulated human remains are associated with this period, frequently displaying signs of violence (Jones 2008). Aside from this 'massacre' deposit, human remains, including burials, have also been identified on other parts of the site. It is currently not possible to relate the individuals sampled for aDNA analysis to specific excavated contexts.

Petrous bones from three individuals were successfully analysed for aDNA, yielding: sample I11995 (female), from a perinate (2209), dating to 2409±30 BP (SUERC-94992; 742–399 cal BCE); sample I21302 (male), from Group V burial 76.AA.165/3674, dating to 1989±30 BP

(SUERC-94994; 46 cal BCE–cal CE 117); and sample I21303 (female), from Group V burial SCK 614 (76AA165/3557), dating to 2048±26 BP (SUERC-94998; 153 cal BCE–cal CE 25).

A further petrous bone from 76.AA.165/4086 has been sampled for aDNA but has not yet been analysed.

Source of samples: Somerset Museums Service

Author of entry: Ian Armit

References:

Barrett, J.C., Freeman, P.W. and Woodward, A. 2000. *Cadbury Castle Somerset: The Later Prehistoric and Early Historic Archaeology*. London: English Heritage.

Jones, S. 2008. *Slain at the Gate: A Reassessment of the 'Massacre' Deposits from Cadbury Castle, Somerset*. Unpublished MSc dissertation, Bournemouth University.

Carsington Pasture Cave, Brassington, Derbyshire, England, UK

Carsington Pasture Cave is located in the southern Peak District, around 1km east of Brassington village, Derbyshire (Chamberlain 1999; 2001; Papakonstantinou 2004). The cave was originally explored and excavated in 1998 by members of the Pegasus Caving Club and archaeologists from the University of Sheffield, revealing three successive chambers joined by near-vertical passages. More recent explorations by cavers have periodically produced more finds.

Large quantities of disarticulated human and faunal bone have been recovered from all chambers and adjoining passages. The human bone was mostly concentrated in the second chamber and represents the remains of at least 20 individuals, mostly mature adults and neonatal infants. The neonatal infant remains were found mostly complete, in partial articulation and concentrated in the centre of the second chamber, suggesting that this area was reserved for primary deposition of young infants. The adult bones were dispersed through the three chambers although skeletal part representation suggested that whole bodies were originally interred, with sediment and carnivore action (as indicated by gnaw marks on a small proportion of bone surfaces) distributing the remains through the chambers over time. Very few dateable finds were recovered from the cave, but a bone pin and a worked antler fragment dating typologically to the Bronze Age and Neolithic respectively were found in the second chamber. Radiocarbon dating of human remains from the cave have produced Early Neolithic, Early Bronze Age and Iron Age dates. All of the neonatal skeletons that have been dated so far have produced dates in the Early to Middle Iron Age, suggesting that they represent a specific depositional horizon. Two disarticulated adult human bones from the second chamber have also produced Iron Age dates.

Palaeogenetic data obtained from eight petrous portions of temporal bones were included in this study. Five of these petrous temporals belonged to partially articulated and articulated neonatal skeletons included as part of the deposit in the second chamber: sample I12778 (male; TB106; CPC98-011), dating to 2230±20 BP (PSUAMS-8289; 381–203 cal BCE); sample I12775 (male; TB103, CPC-98-018), dating to 2200±20 BP (PSUAMS-8287; 361–177 cal BCE); sample I12776 (female; TB104; CPC15-058), dating to 3515±20 BP (PSUAMS-8288; 1918–1750 cal BCE); sample I12779 (female; TB107; CPC98-018b), dating to 2210±20 BP (PSUAMS-8290; 370–197 cal BCE); and sample I12770 (female; SB476; CPC02Y3-039), which has been directly dated to 2217±44 BP (UBA-30798; 390–171 cal BCE).

The other three samples came from disarticulated adult temporal bones recovered from various parts of the cave: sample I12774 (male; TB102; CPC-02-Y-062), dating to 2460±30 BP (OxA-29233; 758–416 cal BCE); sample I12771 (male; SB479; CPC99-029), dating to 2321±36 BP (UBA-32284; 513–210 cal BCE); and sample I3014 (female; SB382B2; CPC-2014), dating to 2209±31 BP (UBA-30432; 377–177 cal BCE).

Palaeogenetic data included here add to data from three individuals from Carsington Pasture Cave dating to the Neolithic and Bronze Age which were published in Olalde et al. (2018) and Brace et al. (2019).

Source of sample: Andrew Chamberlain, University of Manchester

Author of entry: Tom Booth

References:

Brace, S., Diekmann, Y., Booth, T.J., van Dorp, L., Faltyskova, Z., Rohland, N., Mallick, S., Olalde, I., Ferry, M., Michel, M., Oppenheimer, J., Broomandkhoshbacht, N., Stewardson, K., Martiniano, R., Walsh, S., Kayser, M., Charlton, S., Hellenthal, G., Armit, I., Schulting, R., Craig, O.E., Sheridan, A., Parker Pearson, M., Stringer, C., Reich, D., Thomas, M.G., Barnes, I., 2019. Ancient genomes indicate population replacement in Early Neolithic Britain. *Nature Ecology and Evolution* 3, 765–71.

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Chamberlain, A.T. 2001. Radiocarbon Dates from Carsington Pasture Cave, Brassington, Derbyshire. *Capra* 3. <http://capra.group.shef.ac.uk/3/carsdates.html>

Olalde, I., Brace, S., Allentoft, M.E., Armit, I., Kristiansen, K., Booth, T., Rohland, N., Mallick, S., Szécsényi-Nagy, A., Mittnik, A., Altena, E., Lipson, M., Lazaridis, I., Harper, T.K., Patterson, N., Broomandkhoshbacht, N., Diekmann, Y., Faltyskova, Z., Fernandes, D., Ferry, M., Harney, E., de Knijff, P., Michel, M., Oppenheimer, J., Stewardson, K., Barclay, A., Alt, K.W., Liesau, C., Ríos, P., Blasco, C., Miguel, J.V., García, R.M., Fernández, A.A., Bánffy, E., Bernabò-Brea, M., Billoin, D., Bonsall, C., Bonsall, L., Allen, T., Büster, L., Carver, S., Navarro, L.C., Craig, O.E., Cook, G.T., Cunliffe, B., Denaire, A., Dinwiddy, K.E., Dodwell, N., Ernée, M., Evans, C., Kuchařík, M., Farré, J.F., Fowler, C., Gazebeek, M., Pena, R.G., Haber-Uriarte, M., Haduch, E., Hey, G., Jowett, N., Knowles, T., Massy, K., Pfrengle, S., Lefranc, P., Lemerrier, O., Lefebvre, A., Martínez, C.H., Olmo, V.G., Ramírez, A.B., Maurandi, J.L., Majó, T., McKinley, J.I., McSweeney, K., Mende, B.G., Modi, A., Kulcsár, G., Kiss, V., Czene, A., Patay, R., Endrődi, A., Köhler, K., Hajdu, T., Szeniczey, T., Dani, J., Bernert, Z., Hoole, M., Cheronet, O., Keating, D., Velemínský, P., Dobeš, M., Candilio, F., Brown, F., Fernández, R.F., Herrero-Corral, A.-M., Tusa, S., Carnieri, E., Lentini, L., Valenti, A., Zanini, A., Waddington, C., Delibes, G., Guerra-Doce, E., Neil, B., Brittain, M., Luke, M., Mortimer, R., Desideri, J., Besse, M., Brücken, G., Furmanek, M., Hałaszkó, A., Mackiewicz, M., Rapiński, A., Leach, S., Soriano, I., Lillios, K.T., Cardoso, J.L., Pearson, M.P., Włodarczak, P., Price, T.D., Prieto, P., Rey, P.-J., Risch, R., Rojo Guerra, M.A., Schmitt, A., Serralongue, J., Silva, A.M., Smrčka, V., Vergnaud, L., Zilhão, J., Caramelli, D., Higham, T., Thomas, M.G., Kennett, D.J., Fokkens, H., Heyd, V., Sheridan, A., Sjögren, K.-G., Stockhammer, P.W., Krause, J., Pinhasi, R., Haak, W., Barnes, I., Lalueza-Fox, C., Reich, D. 2018. The Beaker phenomenon and the genomic transformation of northwest Europe. *Nature* 555, 190–6.

Papakonstantinou, N. 2009. *Human Skeletal Remains from Neolithic Caves in the Peak District: An Osteoarchaeological and Taphonomic Approach*. Unpublished MSc dissertation, University of Sheffield.

Casterley Camp, Wiltshire, England, UK

Casterley Camp is a large univallate hillfort with associated enclosures of Late Iron Age and Romano-British date (Cunnington and Cunnington 1913). Four burials (three adults and one child aged around 6 years old at death) were recovered from Pit 2, during excavations in 1909, and a further skeleton was buried within a rectilinear enclosure (*ibid.*, 94). The main group were found together in what may have been a smaller pit intercutting the main Pit 2 (described as an 'annex' by the excavators) and were associated with the spring from an iron fibula, a loom weight and spindle whorl, pottery sherds and numerous red deer antlers (*ibid.*, 77–8). They do not appear to represent formal burials and lay in a variety of positions.

Three human petrous bones (possibly, but not certainly those from Pit 2) have been successfully analysed for aDNA. These yielded sample I21312 from individual C30 (male), dating to 2124±27 BP (SUERC-97418; 343–51 cal BCE); sample I21313 from individual C29 (male), dating to 2154±27 BP (SUERC-97419; 354–57 cal BCE); and sample I21314 from individual C31 (female) 2123±27 BP (SUERC-97420; 342–51 cal BCE).

Samples I21313 and I21314 are second degree relatives with different mitochondrial haplogroups.

Source of sample: Wiltshire Museum

Author of entry: Ian Armit

Reference: Cunnington, M.E. and Cunnington, B.H. 1913. Casterley Camp. *Wiltshire Archaeological and Natural History Magazine* 38: 53–105.

Catcote, Hartlepool, Co. Durham, England, UK

Catcote is an Iron Age and Romano-British settlement site which lies on a south-east facing slope near Hartlepool. It was discovered in the 1960s during landscaping work for a school playing field. Excavations were carried out by Cliff Long of the University of Durham (Long 1988) and again in the 1980s by Cleveland County Archaeology Section (Vyner and Daniels 1987). More recently (between 1998 and 2008) Tees Archaeology ran a series of excavations as training exercises for Durham University students. The latter campaign of excavation is as yet unpublished and it was during this work that the sampled skeleton was discovered.

The settlement seems to have been established in the later Iron Age and on numismatic evidence continued into the early fourth century CE. The settlement comprised a series of enclosures containing roundhouses, with a transition to the construction of rectilinear buildings by the fourth century CE. While the quantity and quality of artefacts is not exceptional, the site has yielded a significant number of coins when compared to other regional indigenous settlements. On the basis of this, and the longevity of the settlement, it is suggested that it may have had a significant administrative role locally and been engaged in trade with Roman vessels landing on the sandy beaches less than 2 miles (2.89km) away.

Fourteen inhumations and one cremation are known from the site to date. These are distributed around the settlement site and there is no defined cemetery. The petrous portion of a temporal bone from the Skeleton 2 (context 23) found in Grave 21 yielded sample I16620 (female), dating to 2143±25 BP (SUERC-97711; 340 cal BCE–cal CE 6; marine corrected). This represents one of two burials found close together to the immediate south-west of the main settlement. Grave 21 was sub-rectangular with steep sides and a flat base, except at the north

end where there was a deeper, rounded profile. It measured 1.16m by 0.7m and was 0.14m deep, increasing to 0.22m in the deeper north end. The fill of the grave (context 22) was a pale grey brown sandy silt containing occasional small pebbles. The skeleton was in a crouched position on its left side with the head at the south end, and its feet on the edge of the deeper part of the grave. A bronze fibula was found adjacent to the feet and may have been fastening something deposited in the deeper part of the grave, rather than an item of clothing around the body.

Source of sample: Tees Archaeology

Author of entry: Robin Daniels, Tees Archaeology

References:

Long, C.D. 1988. The Iron Age and Romano-British Settlement at Catcote, Hartlepool. *Durham Archaeological Journal* 4: 13–36.

Vyner, B.E. and Daniels, R. 1989. Further excavations at the Iron Age and Romano-British Settlement at Catcote, Hartlepool, Cleveland 1987. *Durham Archaeological Journal* 5: 11–34.

Cleevelands, Bishop's Cleeve, Gloucestershire, England, UK

Two areas totalling 5.3 hectares were excavated in Cleevelands in the village of Bishop's Cleeve by Cotswold Archaeology on behalf of Persimmon Severn Valley (Cotswold Archaeology 2019). A ditched enclosure dating to the late first to second century CE was located in the south-eastern part of the site. A group of three burials was recovered within 9m of each other near the ditch forming the western extent of the enclosure. The burials were all positioned parallel with the ditch in a north-east/south-west alignment. Sample I12927 (male; Skeleton I1323; TB125) came from the petrous temporal of an adult male in a crouched posture on his left side. The burial was accompanied by a Colchester-derivative brooch dating typologically to the late first–second century CE. Sample I12932 (female; Skeleton I0538; TB132) came from the petrous temporal of the highly flexed skeleton of an older adult placed on her left side. Sample I12931 (male; Skeleton I0540; TB131) was taken from the petrous temporal of a highly flexed individual placed on his left side. The presence of nails in the grave of Skeleton I0540 suggest that the body had been placed in a coffin.

Source of sample: Sharon Clough, Cotswold Archaeology

Author of entry: Tom Booth

Reference: Cotswold Archaeology. 2019. *Cleevelands (Phase 1a/2a, Phase 1–4b, Pond D and Swales), Bishop's Cleeve, Gloucestershire: Archaeological Excavation*. Unpublished Cotswold Archaeology report 18495.

Cliffs End Farm, Kent, England, UK

Cliffs End Farm was a later prehistoric mortuary complex on the Isle of Thanet, Kent, with three distinguishable phases of funerary activity in the eleventh–ninth, fifth and fourth–third centuries BCE (McKinley et al. 2014). The site comprised three main features (themselves set amongst a series of Early Bronze Age barrows): two (Northern and Central) enclosures, which seem to have facilitated communal gatherings, and a 'Mortuary Feature' where most of the human bone was concentrated. The human bone assemblage falls into four main groups: in situ articulated remains recovered from graves and pits, partial articulated remains, dispersed semi-articulated remains and isolated skeletal elements or parts thereof. The remains represent those of at least 42 individuals (13 articulated skeletons and 39 amongst the disarticulated and commingled bones). The in situ burial remains date to all three periods of mortuary activity (Late Bronze Age, Early Iron Age and Middle Iron Age). Seven of these were located within

‘Burial Pit 3666’ in the northern part of the Mortuary Feature, which was the focus for deposition in the Late Bronze Age, with the rest—deposited in the Early–Middle Iron Age—forming a dispersed east–west group across the width of the southern portion of the Mortuary Feature. The majority of disarticulated redeposited bone, recovered predominantly from Burial Pit 3666 and midden-like deposits associated with the Northern Enclosure, appear to date to the Late Bronze Age, with a few outliers of Early and Middle Iron Age date dispersed across the southern section of the Mortuary Feature.

Sixteen human petrous bones and four human teeth were successfully analysed for aDNA; two further teeth failed analysis: one from burial remains 3674, dating to 2754 ± 27 BP (OxA-18597; 980–820 cal BCE), in Late Bronze Age burial pit 3666; and the other from an Early Iron Age mandible fragment (ON 278) forming part of a bone deposit in the Mortuary Feature.

Late Bronze Age: Northern Enclosure

Sample I14742 (tooth; male), dating to 2795 ± 20 BP (PSUAMS-7671; 1011–860 cal BCE), derived from the cranium of an individual aged 15–18 years, recovered from the fill (2471) of the remodelled terminal (3699) of the enclosure ditch. The fill of the original terminal (2469) contained pottery dating to 2807 ± 29 BP (PR784; OxA-18447; 1040–890 cal BCE). Other finds from the terminal fills included worked bone objects and a copper alloy pin as well as human and animal bone.

Late Bronze Age: Burial Pit 3666

Sample I14745 (tooth; female), dating to 2677 ± 30 BP (OxA-17805; 900–798 cal BCE), derived from in situ burial remains 3675. This elderly woman represented the earliest surviving in situ remains within Burial Pit 3666 and had suffered extensive peri-mortem sharp force weapon trauma to the back of her head. There was some formality to her deposition, since in her left hand she held a piece of chalk up to her face, while the index finger of her right hand appears to have been placed to point south-west towards the Central Enclosure. Two neonatal lambs were also placed in her lap. Sample I14864 (petrous; female), dating to 2750 ± 35 BP (GrA-36002; 983–816 cal BCE), derived from burial remains 3680. The head of this teenage individual (17–18 years), had been laid on an articulated cattle skull whilst her torso overlay the feet of the elderly woman (3675). Sample I14862 (petrous; female), dating to 2745 ± 35 BP (GrA-36000; 982–812 cal BCE), derived from the remains of a juvenile (burial remains 3676; 10–12 years). The hands of this individual lay together (possibly tied) under the chin, and the head had been manipulated to ‘face’ a large fragment of pottery. Sample I14861 (petrous; male), dating to 2713 ± 29 BP (OxA-17804; 912–808 cal BCE), derived from the bundled remains of articulated body parts (3673) comprising the head, part of the axial skeleton/thorax and left upper limb. With an isotopic signature suggesting a non-local origin, the remains had been deposited on top of an articulated cattle foot (ON 627) and were associated with a composite polished bone and copper alloy pendant (ON 607). Sample I14358 (petrous; male; ON 100), dating to 2710 ± 30 BP (GrA-37966; 912–807 cal BCE), and sample I14377 (petrous; female; ON 101), dating to 2790 ± 30 BP (GrA-37751; 1014–836 cal BCE), derived from discrete deposits of disarticulated human remains (2058) recovered from one of the fills overlying the in situ burial remains. The isotopic signatures for both individuals represented by these bones suggest (different) non-local origins. Sample I14379 (petrous; female), dating to 2698 ± 27 BP (OxA-18429; 903–807 cal BCE), derived from burial remains 3649, the burial apparently having been made within the shallow ring ditch (3703) cut through the upper fills of burial pit 3666 to mark the main focus of its location. Sample I14865 (petrous; female), dating to 2735 ± 30 BP (GrA-37713; 967–811 cal BCE), derived from a fragmentary

cranium (ON 556) recovered from the area adjacent to burial pit 3666 amongst a group of other redeposited bone (context 184804).

Early Iron Age: Mortuary Feature

Sample I14381 (petrous; female), dating to 2405 ± 27 BP (OxA-18430; 727–400 cal BCE), derived from in situ burial remains 3656. The isotopic signature of this mature adult woman suggests that she might have been born non-locally but moved to the area during her lifetime. Sample I14857 (petrous; female), dating to 2365 ± 35 BP (GrA-35980; 719–384 cal BCE), derived from burial remains 3616 (a teenager aged 14–18 years). Sample I14743 (tooth; male), dating to 2502 ± 30 BP (SUERC-95002; 779–524 cal BCE), derived from the semi-articulated dispersed skeletal remains (3614) of an adult, comprising parts of the skull, axial skeleton and upper limbs. The sample was found to contain evidence of contamination and is not included in the analysis.

Middle Iron Age: Mortuary Feature

Sample I14378 (petrous; female), dating to 2275 ± 30 BP (GrA-37911; 400–208 cal BCE), was taken from burial remains 3563, which lay at the far east of the group of graves stretching east–west across the southern half of the Mortuary Feature. Sample I14866 (petrous; male), dating to 2215 ± 30 BP (SUERC-24071), 2244 ± 27 BP (OxA-20795) and 2176 ± 27 BP (SUERC-97414), with a weighted mean of 2212 ± 21 BP (372–197 cal BCE), derived from the disarticulated remains (context 243204) of an apparently non-local individual. Sample I14747 (tooth; female), dating to 2375 ± 25 BP (OxA-20796) and 2350 ± 30 BP (SUERC-24072), with a weighted mean of 2365 ± 20 BP (514–391 cal BCE), derived from bone deposit 203007. Sample I14860 (petrous; female), dating to 2225 ± 30 BP (GrA-37686; 386–198 cal BCE), was from burial remains 3662. Isotopic analysis suggests that she was non-local. Sample I14859 (petrous; male), dating to 2250 ± 35 BP (GrA-35998) and 2220 ± 20 BP (PSUAMS-8551), with a weighted mean of 2227 ± 18 BP (377–203 cal BCE), derived from burial remains 3660, whose isotopic signature suggests a non-local origin. This individual was placed in the grave over the partial remains of a horse. Sample I14380 (petrous; male), dating to 2237 ± 28 BP (OxA-17802; 387–203 cal BCE), was taken from burial remains 3651. This individual's isotopic signature suggests that he was non-local. Sample I14858 (petrous; female), dating to 2265 ± 30 BP (GrA-37707; 396–207 cal BCE), was taken from burial remains 3644; this woman's isotopic signature suggests a non-local origin. Sample I14863 (petrous; female), dating to 2198 ± 26 BP (OxA-18432) and 2205 ± 30 BP (GrA-37687), with a weighted mean of 2201 ± 20 BP (360–201 cal BCE), derived from burial 3677; she was possibly of non-local origin.

Source of samples: Wessex Archaeology

Author of entry: Lindsey Büster and Jacqueline McKinley

Reference: McKinley, J.L., Leivers, M., Schuster, J., Marshall, P., Barclay, A.J. and Stoodley, N. 2014. *Cliffs End Farm, Isle of Thanet, Kent. A Mortuary and Ritual Site of the Bronze Age, Iron Age and Anglo-Saxon period* (Wessex Archaeology Report 31). Salisbury: Wessex Archaeology.

Constantine Island, St. Merryn, Cornwall, England, UK

Excavations at Constantine Island revealed a barrow containing an adult male crouched inhumation burial and some disarticulated bones. The barrow seems to have been constructed in the Early Bronze Age but the inhumation burial appears to be from the Middle Bronze Age, a time for which very few human remains are known from Cornwall and no other barrow-associated burials are currently recorded. The petrous temporal of the crouched inhumation

yielded sample I16454 (male; Cist 8), dating to 2985±35 BP (SUERC-16818; 1381–1056 cal BCE).

Source of sample: Andy Jones, Cornwall Archaeology Unit and Sophie Meyer, Royal Cornwall Museum

Author of entry: Claire-Elise Fischer

Reference: Jones, A. 2009–2010. Excavation of a barrow on Constantine Island, St Merryn, Cornwall. *Cornish Archaeology* 48–49: 67–97.

Cow Down, Longbridge Deverill, Wiltshire, England, UK

The site at Cow Down is an Early Iron Age settlement consisting of a series of enclosures and associated roundhouses dating broadly to between the ninth and sixth centuries BCE, and a large number of pits, dating to approximately the fifth to early third centuries cal BCE (Brown 2012, 67). Several of these pits contained human remains, which appear to have been largely disarticulated, although some articulated burials were recovered. A human tooth from a disarticulated mandible fragment found in Pit 21 was successfully analysed for aDNA: sample I16595 (female), dating to 2238±27 BP (SUERC-95000; 387–204 cal BCE).

Source of sample: Wiltshire Museum

Author of entry: Ian Armit

Reference: Brown, L. 2012. The Enclosure II pits, in Hawkes, C., Brown, L. and Hawkes, S. C. 2012. *Longbridge Deverill Cow Down: an early Iron Age settlement in West Wiltshire*, 65–73. Oxford: Oxford University School of Archaeology.

Dalton Parlours, West Yorkshire, England, UK

Dalton Parlours is the site of an extensive Iron Age settlement complex, later replaced by a Roman villa and its outbuildings (Wrathmell and Nicholson 1990).

A crouched burial (Burial 2; SF602) in a shallow grave without grave goods was recovered from the north-west corner of Enclosure III (ibid., 17). A human tooth from this burial was successfully analysed for aDNA and yielded sample I14837 (female), dating to 2140±70 BP (HAR-6715; 381 cal BCE–cal CE 6).

Source of samples: Leeds Museums and Galleries

Author of entry: Ian Armit

Reference: Wrathmell, S. and Nicholson, A. 1990. *Dalton Parlours Iron Age Settlement and Roman Villa*. Yorkshire Archaeology 3. Wakefield: West Yorkshire Archaeology Service.

Danebury, Nether Wallop, Hampshire, England, UK

The Iron Age hillfort of Danebury in Hampshire was excavated by Professor Barry Cunliffe from 1969–88. It yielded large numbers of roundhouses, rectangular structures and storage pits. Moreover, about 300 individual deposits of human remains were found, most frequently placed in disused grain storage pits. The human remains fall into six categories of deposition ranging from whole bodies, placed singly or in groups, to individual bones or bone fragments (Cunliffe 1995; Cunliffe et al. 2015).

Ceramic typology (corroborated by radiocarbon dating) indicates four broad phases of Iron Age activity at Danebury. The first phase (470–310 BCE) ended in destruction by fire; the second phase (310–270 BCE) ended with blocking of the western gate; the third phase lasted

from 270–50 BCE, followed by a period of abandonment; with the fourth and last phase dating to 50 BCE–CE 50 (Cunliffe et al. 2015).

Here we report aDNA data from nine individuals (see Cunliffe et al. 2015, Table 1 for full details of the radiocarbon dates). Sample I16612 (female; A1979.1; Deposit 3; Pit 37), dating to 2389 ± 26 BP (OxA-25953; 658–397 cal BCE), and sample I16613 (male; DA76; Deposit 33; Pit 923), dating to 2147 ± 26 BP (OxA-25954; 351–54 cal BCE) were obtained from teeth. The other seven samples were obtained from petrous bones and comprised: sample I17263 (female; DA75; Deposit 27; Pit 807), dating to 2133 ± 26 BP (OxA-25958; 346–52 cal BCE); sample I17264 (male; DA75; Deposit 28; Pit 829); sample I17266 (female; DA82; Deposit 214; Pit 1993), dating to 2162 ± 27 BP (OxA-25956; 355–60 cal BCE); sample I17267 (female; DA76; Deposit 40; Pit 923); sample I20988 (male; DA74; Deposit 26; Pit 639); sample I20989 (male; DA78; Deposit 46; Pit 1015), dating to 2157 ± 26 BP (OxA-25955; 354–59 cal BCE); and sample I20990 (female; DA86; Deposit 241; Pit 1114), dating to 2192 ± 27 BP (OxA-25957; 362–171 cal BCE).

Source of samples: Ross Turle (Hampshire Cultural Trust)

Author of entry: Claire-Elise Fischer

References:

Cunliffe, B. 1995. *Danebury: An Iron Age Hillfort in Hampshire. Vol. 6: A Hillfort Community in Perspective*. York: Council for British Archaeology.

Cunliffe, B., Farrell, P. and Dee, M. 2015. A happening at Danebury hillfort – but when? *Oxford Journal of Archaeology* 34: 407–14.

Diamond Cottage, Tickenham, Somerset, England, UK

An Early Bronze Age cist burial was excavated in 1988 in the garden of Diamond Cottage, Tickenham, Somerset (Anderson et al. 1989). The single individual inside lay crouched on their left side and was accompanied by a shale bead and globule of copper alloy. A petrous bone from the skeleton was successfully analysed for aDNA, yielding sample I21306 (male).

Source of sample: Somerset Museums Service

Author of entry: Ian Armit

Reference: Anderson, C.F., Marriott, E. and Dagnall, J.M.M. 1989. A crouched inhumation burial at Tickenham, Avon. *Bristol and Avon Archaeology* 8: 48–50.

Dibbles Farm, Christon, Somerset, England, UK

Dibbles Farm, Christon was excavated on the route of the M5 motorway in 1970, revealing a farmstead dated to the Early and Middle Iron Age associated with a series of burials (Morris 1988). Six human petrous bones and three teeth were successfully analysed for aDNA. The petrous bones yielded sample I17015 (female) from Pit XLVI(b), dating to 2215 ± 27 BP (SUERC-94983; 380–197 cal BCE); sample I17014 (male), dating to 2213 ± 30 BP (SUERC-94982; 381–179 cal BCE), from an individual lying face down in Pit XVII and wearing an iron spiral armlet; sample I11148 (female), from Pit XXXVII, dating to 2297 ± 30 BP (SUERC-94981; 407–211 cal BCE) and buried with a perforated boar tusk; sample I11147 (female) from Pit X, dating to 2248 ± 30 BP (SUERC-94978; 392–204 cal BCE) and buried with a small bronze hook; sample I17017 (female) from Pit XXI, dating to 2087 ± 30 BP (SUERC-94988; 196 cal BCE–cal CE 5) and buried with a pottery vessel; and sample I17016 (male) from Pit XVI, dating to 2210 ± 30 BP (SUERC-94984; 377–178 cal BCE). The three teeth yielded sample I16591 (male) from Pit A, dating to 2305 ± 27 BP (SUERC-94979; 408–232 cal BCE);

sample I13685 (female) from Pit XLIV, dating to 2276±30 BP (SUERC-94980; 400–208 cal BCE) and buried with two dogs; and sample I16592 (male) from Pit XXXIX(b).

A further sample (petrous; I17018) was found to be from the same individual as sample I16592 (a juvenile male around 12–14 years of age at death), and produced an AMS date of 2227±30 BP (SUERC-94989; 387–199 cal BCE), though curiously, it derived from a different pit (XIII). The data have been merged under sample I16592 for the purposes of analysis.

Source of samples: Somerset Museums Service

Author of entry: Ian Armit

Reference: Morris, E. L. 1988. The Iron Age occupation at Dibbles Farm, Christon. *Proceedings of the Somerset Archaeological and Natural History Society* 132: 23–81.

Ditchling Road, Brighton, Sussex, England, UK

Widening of the eastern side of Ditchling Road, Brighton in 1921 encroached on a small platform barrow, around 500m south of Old Boat Corner. Excavation of the barrow uncovered a central grave. Fragments of human skull, parts of a humerus, an ulna and the head of a femur representing at least one individual were found strewn through the grave fill. It was assumed that the burial had been disturbed in antiquity, resulting in the scattering of human remains from the primary burial through the fill. The association with the platform barrow suggests that the burial probably dated to the Chalcolithic or Early Bronze Age (2450–1600 BCE). The petrous portion of a temporal bone found amongst the skull fragments (R2315/2) yielded sample I14543 (female). The data from this individual adds to that obtained from another Bronze Age burial near Ditchling Road reported in Olalde et al. (2018).

Source of sample: Andy Maxted, Brighton Museum

Author of entry: Tom Booth and Andy Maxted

East Coast Pipeline, East Riding of Yorkshire, England, UK

In 2009–10, a major programme of archaeological mitigation was undertaken in advance of construction of a water pipeline running between Irton, North Yorkshire and Haisthorpe, East Riding of Yorkshire. A large number of sites, ranging in date from the Mesolithic to Early Medieval periods, were investigated during the work. Burials which provided samples for the current study were, however, all found on a short part of the route near its southern end, in Fields 9 to 16 which ran northwards between Boynton and Argham in the East Riding of Yorkshire. Samples from ten individuals were successfully analysed for aDNA for inclusion in the current study.

An isolated grave at the northern edge of Field 9 contained Skeleton 5214, an infant aged 3–4 years, dated to 2105±35 BP (SUERC-33543; 343–1 cal BCE). Struck flints within the grave were probably residual. Petrous bone from this individual provided sample I22060 (male).

In Field 10, a round barrow was represented by two phases of ring-ditch associated with a disturbed beaker. In the early Bronze Age, secondary burials included two inhumations and a cremation in a Collared Urn, followed in the Middle Bronze Age by another cremation in a Bucket urn. The two inhumation burials were sampled. Skeleton 1707, truncated by ploughing, had been placed in a crouched position on its right side with its head to the south. It lay within an oval pit near the centre of the barrow. Possible grave goods comprised three flint flakes, a flint scraper, a possible flint bead/talisman, three fossils and a boar tooth. A jet bead or toggle was found in disturbed soil above the burial. A tooth from the middle-aged adult provided

sample I19220 (female), dated to 3486 ± 32 BP (SUERC-52008; 1894–1695 cal BCE). Skeleton 1772 had been buried 3m to the south, also lying in a crouched position on its right side with the head to the west. A large stone had been placed over the abdomen, but none of the other objects found in the grave appeared to be intentional grave goods. Petrous bone from this individual provided sample I18606 (male), dated to 3502 ± 28 BP (SUERC-52010; 1919–1742 cal BCE).

Another round barrow, represented by two concentric ring ditches, was partially investigated in Field 13. Skeleton 4040 lay within a sub-rectangular grave located off-centre to the monument and hence was presumably not the primary burial. The body had been placed on its back with the head to the north-west. The skeleton was contracted with the knees above the pelvis and the arms crossed over the abdomen. The individual was an old middle adult buried without any certain grave goods. Petrous bone provided sample I14326 (female), dated to 4336 ± 32 BP (SUERC-52011; 3074–2892 cal BCE).

In Field 16 was another multi-phased enclosure complex of Iron Age and Romano-British date. Cut into one of the ditches was a burial containing a flexed adult inhumation (skeleton 4287) placed on its right side with the head at the eastern end of the grave. Petrous bone provided sample I22057 (female), dated to 2031 ± 27 BP (SUERC-52029; 104 cal BCE–cal CE 65).

To the north of the enclosure complex the pipeline easement revealed the truncated remains of three square barrows. The first had a central grave containing skeleton 4224 laid in a contracted position on its left side with the head to the south and facing west. The burial was accompanied by a pottery jar and an iron Bow Brooch. A second grave was found close to the south-western corner of the barrow, containing skeleton 4295, a mature adult found lying in a flexed position. Petrous bones from the two skeletons respectively provided sample I14327 (male) dated to 2113 ± 29 BP (SUERC-52028; 340–47 cal BCE), and sample I22064 (female) dated to 2032 ± 27 BP (SUERC-52030; 105 cal BCE–cal CE 64).

The second square barrow had a central grave containing a flexed inhumation 4181 placed on its left side with the head at the north end, facing east. The arms were bent above the head. The individual, who was aged 36–45 years, was accompanied by parts of two pigs, and two copper alloy Glastonbury type/La Tène type II brooches. Petrous bone from skeleton 4181 provided sample I22052 (female), dated to 2128 ± 27 BP (SUERC-52024; 344–52 cal BCE).

The central grave in the third square barrow contained two contracted inhumations. Skeleton 2504 in the eastern side of the grave lay on its back with the head to the north, while skeleton 2405 lay on its left side with the head to the south. Skeleton 2504 was aged 26–35 years while skeleton 2505 was an adult of uncertain age. The irregular shape of the grave left the possibility that the two burials lay within separate but intercutting pits and were not contemporary. Neither burial was accompanied by grave goods. Petrous bones from the two skeletons (2504 and 2505) provided sample I22056 (female) dated to 2241 ± 31 BP (SUERC-52013; 391–201 cal BCE) and sample I22055 (female) dated to 2239 ± 31 BP (SUERC-52014; 391–201 cal BCE) respectively.

Source of sample: Northern Archaeological Associates Ltd

Author of entry: Greg Speed

Reference: Pettersen, A., Pole, C., Robinson, G. and Teasdale, A. 2012. *East Coast Pipeline, North Yorkshire and East Riding of Yorkshire: Post-Excavation Assessment Report*. Unpublished, Northern Archaeological Associates Report No. 12–39.

East Kent Access Road, Kent, England, UK

Oxford Wessex Archaeology (OWA) Joint Venture undertook 48ha of archaeological excavations in advance of construction of the East Kent Access Road (Phase II), predominantly between November 2009 and September 2010 (Andrews et al 2015a; 2015b). The road cut a substantial transect across Thanet, which (as the result of inundation of the Wantsum Channel, which was well advanced by the Late Mesolithic) effectively formed an island from perhaps the Early Bronze Age to the fifteenth century CE. The multi-period landscape included Early Bronze Age ring-ditches, the remains of Middle Bronze Age inhumation burials, at least three Late Bronze Age settlements, together with a cremation cemetery and four metalwork hoards, and extensive evidence for Iron Age activity in the form of settlements, the remains of pit burials, enclosures, field systems and trackways. Roman trackways respected the former Iron Age landscape and were again associated with settlements, enclosures and field systems, and now cemeteries. A substantial ditch was dug in the first century BCE to enclose this strategically important area, both the original and later phase of the feature possibly being initiated in response to the threat of Roman invasion. Two areas of early-mid Saxon settlement (and associated cemeteries; sixth–eighth centuries CE) were also identified, as were several Medieval farmsteads dating to the eleventh–fourteenth centuries CE.

A total of twenty-two petrous bones and two teeth were successfully analysed for aDNA.

Middle and Late Bronze Age Graves

Seven human petrous bones from Middle/Late Bronze Age individuals were successfully analysed for aDNA. Sample I13710 (male), dating to 3040 ± 35 BP (SUERC-40714; 1411–1203 cal BCE), derived from burial 126181 (in grave 126180), which occupied a central position within barrow 232168 in Zone 21.

Samples were also taken from the remains of two Middle Bronze inhumation burials made in and between the ditches of the Early Bronze Age barrows in Zone 13. Sample I19915 (female), dating to 3210 ± 30 BP (SUERC-40300; 1519–1422 cal BCE), derived from a 35–45-year-old individual in burial 221016 (grave 221014) located between the ditches of Barrow 1. The partially-silted ditch of Barrow 2 was cut by grave 200090, containing the remains (burial 200089) of a 60–80-year-old, who yielded sample I19913 (female), dating to 3055 ± 30 BP (SUERC-40297; 1408–1226 cal BCE).

Six unaccompanied inhumation burials in Zone 21 (five attributed to the Late Bronze Age and one dated to the Early Bronze Age) lay on a north-east/south-west alignment (Andrews et al. 2015, 102 and Fig. 3.19); significantly, all contained the single burials of adult males. Three of these were sampled for aDNA. Burial 136102 (in grave 136103), from an individual aged 35–45 years, yielded sample I13711 (male), dating to 2830 ± 20 BP (PSUAMS-7667; 1048–920 cal BCE). Sample I13712 (male) derived from an individual aged over 50 years in burial 153065 (in grave 153066), dating to 2815 ± 15 BP (PSUAMS-7613; 1011–916 cal BCE). Sample I13713 (male), dating to 2810 ± 35 BP (SUERC-40719; 1055–837 cal BCE), derived from an individual aged 24–29 years in grave 275007 (burial 275009).

Sample I13714 (male), dating to 3210 ± 35 BP (SUERC-40723; 1533–1417 cal BCE) derived from an adult (burial 290482), 20–23 years, in grave 290481 (McKinley and Egging Dinwiddy 2015, table 13.5; contra Andrews et al. 2015a, 60), which had been inserted into the north-eastern part of the ditch surrounding Early Bronze Age barrow 193123 in Zone 23.

One further petrous bone from an adult female aged >55 years (burial 198244; grave 198245) in Zone 24, dating to 2840±35 BP (SUERC-40724; 1120–910 cal BCE), failed analysis.

Early–Middle Iron Age Isolated Graves/Pit Burials

Thirteen human petrous bones and two teeth from Early–Middle Iron Age individuals were also successfully analysed for aDNA.

A series of pits and quarry scoops lay to the north-west of trapezoidal enclosure 134099 in Zone 13. Interspersed with these were a series of inhumation graves and the remains of pit burials. Sample I13730 (male), dating to 2240±30 BP (SUERC-40301; 390–202 cal BCE), derived from the petrous of an individual aged >45 years in burial 246012 (grave 246011) located within an intercutting complex of pits and quarry scoops. To the west of grave 246011, and also located within the pit/quarry scoop complex, was grave 126127, containing the remains of an individual aged 25–33 years (burial 126128), whose petrous yielded sample I19912 (female), dating to 2200±30 BP (SUERC-40289; 368–173 cal BCE). Sample I13731 (male), dating to 2255±30 BP (SUERC-40302; 393–206 cal BCE), derived from the petrous of a subadult (burial 248091) aged 15–16 years, buried in pit 248090 to the east of the quarry scoops. Sample I13616 (female), dating to 2196±27 BP (SUERC-97433; 356–49 cal BCE; marine corrected), derived from the tooth recovered from burial 200066 (pit 200062). The pit included a biconical pottery vessel (ON583), two clay spindle whorls (ON1500, ON1504), a shale armlet (ON1501), a shale armlet fragment (ON4654), and an iron rod (ON1503) (*ibid.*, Fig. 3.51). Sample I19914 (female), dating to 2230±30 BP (SUERC-40299; 387–200 cal BCE), derived from the petrous of a subadult aged 14–16 years (burial 220093) in grave 220092, situated among another cluster of pits to the north of the trapezoidal enclosure.

An inhumation burial (205108; grave 205111) was made in a disused bell-shaped storage pit (205106) in Zone 19 and comprised the remains of an individual, aged 45–55 years, accompanied by a polished and pierced cattle carpal (ON1808; possibly an amulet). A petrous bone from this individual yielded sample I13732 (male), dating to 2280±30 BP (SUERC-40712; 401–208 cal BCE).

Middle Iron Age Cemetery

The remains of a Middle Iron Age (c. 400–200 BCE) cemetery were found in Zone 12, comprising a group of ten inhumation graves (the remains of five adults, two adults/subadults, two juveniles and an infant) aligned and adjacent to hollow-way 190163 (which must have been in use at the time) and a further three more isolated graves (Andrews et al 2015, 154–5, Fig. 3.45). Sample I19872 (female), dating to 2285±30 BP (SUERC-40287; 403–209 cal BCE), derived from the petrous of an individual (burial 136034), aged 25–29 years, in grave 136033; a small iron nail was recovered from the grave fill. Sample I19907 (female) derived from the petrous of an individual (burial 166004), aged 45–55 years, in grave 166005. This individual wore an iron armlet (ON2) around their left humerus and the grave fill contained iron nail fragments. Sample I19911 (male), derived from the petrous of an individual (burial 153054), aged 35–45 years, in grave 153055. Sample I19909 (male), dating to 2215±30 BP (SUERC-40288; 381–197 cal BCE), derived from the petrous of an individual (burial 153027), aged 40–50 years, in grave 153028, which lay to the south-west of the main group of graves. Isotopic analysis on teeth from individuals yielding samples I19872, I19907, I19911 and I19909 suggest that they spent part of their childhood elsewhere (*ibid.*, 156).

Sample I19873 (male) derives from the petrous of a 7–9-year-old (burial 153039) in grave 153040, which lay on an east–west alignment at the far north of the main grave group. Sample

I19874 (female), derives from the petrous of a 11–13-year-old (burial 153042) in grave 153043). Sample I19908 (female), derived from the petrous of a 13–14-year-old (burial 153012) in grave 153011. Sample I19910 (female), derived from the petrous of an individual (burial 153047), aged 40–50 years, in grave 153048, which lay to the south-west of the main group of graves, east of grave 153028. Sample I13615 (male), derived from the tooth of an individual (burial 126013), aged 21–25 years, in grave 136049.

Late Iron Age/Early Roman Graves

At the north end of Zone 4 (ibid., 233 and Fig. 4.2) a double burial made in grave 147255 had cut into the infill of Middle/Late Iron Age ditch 190288. The grave contained the remains of two individuals: one aged around 16–17 years (burial 147256) and the other over 50 years (burial 147257). A petrous bone from the first interment (burial 147256) yielded sample I19869 (female), dating to 2080±30 BP (SUERC-40286; 175 cal BCE–cal CE 8), while a petrous bone from burial 147257 yielded sample I19870 (female). These two individuals are mother and daughter; given the relative ages at death, we might assume that I19870 represents the former and I19869 the latter.

Source of samples: Wessex Archaeology

Author of entry: Lindsey Büster and Jacqueline McKinley

References:

Andrews, P., Booth, P., Fitzpatrick, A.P. and Welsh, K. 2015a. *Digging at the Gateway: Archaeological Landscapes of South Thanet. The Archaeology of the East Kent Access (Phase II) Volume 1: The Sites*. Oxford/Salisbury: Oxford Wessex Archaeology.

Andrews, P., Booth, P., Fitzpatrick, A.P. and Welsh, K. 2015b. *Digging at the Gateway: Archaeological landscapes of south Thanet. The Archaeology of the East Kent Access (Phase II) Volume 2: The Finds, Environmental and Dating Reports*. Oxford/Salisbury: Oxford Wessex Archaeology.

McKinley, J.I. and Egging Dinwiddy, K. 2015. Human Bone, in P. Andrews, P. Booth, A.P. Fitzpatrick and K. Welsh, *Digging at the Gateway: Archaeological Landscapes of South Thanet. The Archaeology of East Kent Access (Phase II) Volume 2: The Finds, Environmental and Dating Reports*, 325–429. Oxford/Salisbury: Oxford Wessex Archaeology.

Elbolton Cave, Cockerham, North Yorkshire, England, UK

Elbolton Cave was excavated in the late nineteenth and early twentieth centuries, yielding pottery and human remains corresponding to at least 11 inhumations and one cremation. Three substantially complete articulated skeletons were found in seated positions, covered by stone cairns and accompanied by fragments of ceramic vessels of likely Neolithic date (Gilks 1973). Some of the disarticulated human bone showed evidence for carnivore scavenging, possibly indicating the subaerial exposure of bodies (Lord and Howard 2015). Sample I16463 (male) derives from the petrous temporal of one of the seated burials (Individual 1), while sample I16403 (male) derives from a disarticulated petrous temporal (F.208).

Source of sample: Rachel Terry, Craven Museum

Author of entry: Claire-Elise Fischer and Tom Booth

References:

Gilks, J.A. 1973. The Neolithic and Early Bronze Age Pottery from Elbolton Cave, Wharfedale. *Yorkshire Archaeological Journal* 45: 41–54.

Lord, T. and Howard, J. 2013. Chapter 16: Cave archaeology. In T. Waltham and D. Lowe (eds.), *Cave and Karst in the Yorkshire Dales: Volume 1*, 239–51. Buxton: British Cave Research Association.

Fin Cop, Derbyshire, England, UK

Fin Cop hillfort occupies a commanding position on the crest of a hill with a deep and steep-sided limestone valley wrapping around two of its sides. It has a long period of occupation with evidence for Mesolithic, Neolithic, Bronze Age, Iron Age and post-medieval activity (Waddington 2012; Waddington and Montgomery 2017). The hillfort defences date to the mid-Iron Age, having probably been constructed 435–390 cal BCE (68% probability) (Waddington 2012, 201). The human remains from the site were all recovered from within the same destruction deposit within the main hillfort ditch. The bodies had been thrown, or fallen, into the ditch, and the walls of the fort were then systematically destroyed, with the stone thrown on top of the bodies. The people had all entered the ditch from its outer lip, suggesting people had been lined up along its outer edge before being killed. The evidence for bruising on some of the bones and no healing suggests some of the bodies entered the ditch with warm blood, perhaps not yet dead, when the large rocks from the fort wall were thrown onto them. This points to a massacre event following an attack on the hillfort. For each metre of ditch excavated a human body was found. Given that there is at least 400m of ditch, it is likely that several hundred people are buried within it.

A total of 14 skeletons were excavated, with osteological analysis showing that some skeletons were broadly complete individuals, while others were represented by commingled bones where they had fallen through voids in the rock fill or been moved by small mammals, scavengers or predators. Following osteological analysis, it was realised that the remains of Neonate 6 in fact represented at least two individuals due to certain bone duplications, hence the division between Skeletons 6(1) and 6(2). Seven of the skeletons (1, 3, 4, 5, 6(1), 6(2), 7 and 8) have been radiocarbon dated.

Fifteen human bones and teeth, one from each of the burials within the hillfort ditch, were analysed for aDNA, of which fourteen yielded sequence data for further analysis. A tooth from Skeleton 1 (CE052), aged 25–35 years, yielded sample I20620 (female), and produced AMS dates of 2198±27 BP (OxA-21387) and 2285±35 BP (SUERC-26419), with a combined date of 2231±22 BP (382–204 cal BCE); a cranium from a neonate/young infant (Skeleton 2; CE053) yielded sample I20621 (female); a left petrous from Skeleton 3 (CE054), aged 20–25 years, yielded sample I20622 (male) dating to 2165±30 BP (SUERC-31494; 357–60 cal BCE); a right petrous from a perinate/neonate (Skeleton 4; CE055) yielded sample I20623 (female); a tooth from Skeleton 5 (CE056), aged 20–30 years, yielded sample I20624 (male) dating to 2166±24 BP (OxA-23358; 356–108 cal BCE); a long bone from neonate Skeleton 6(1) (CE057) yielded sample I20625 (male), dating to 2120±30 BP (SUERC-31498; 343–49 cal BCE); a long bone from neonate Skeleton 6(2) (CE058) yielded sample I20626 (male), dating to 2135±23 BP (OxA-23359; 346–53 cal BCE); a left petrous from a young infant (Skeleton 7; CE059) yielded sample I20627 (female), which produced AMS dates of 2247±24 BP (OxA-23360) and 2190±30 (SUERC-40141), with a combined date of 2225±19 BP (376–203 BCE); a right petrous from Skeleton 8 (CE060), aged 15–16 years, yielded sample I20628 (male) dating to 2140±30 BP (SUERC-31499; 351–52 cal BCE); a tooth from Skeleton 11 (CE062), aged 25–35 years, yielded sample I20630 (male); a left petrous from a perinate (Skeleton 12; CE063) yielded sample I20631 (female); a long bone from a perinate/neonate (Skeleton 13; CE064) yielded sample I20632 (male); and a long bone from neonatal Skeleton 15 (CE066) yielded sample I20634 (male).

A long bone from adult Skeleton 10 (CE061) failed analysis.

Samples I20632 (Skeleton 13; CE064) and I20633 (a left petrous from perinate/neonate Skeleton 14; CE065) are genetic duplicates. This could suggest that they represent material from the same individual, but since they appear to derive from two different neonatal skeletons, it could also indicate the presence of identical twins. For the purposes of the current analysis, the data have been merged under sample I20632.

Samples I20623 (Skeleton 4; CE055) and I20627 (Skeleton 7; CE059) are second or third degree relatives, as are samples I20631 (Skeleton 12; CE063) and I20632 (Skeleton 13; CE064).

Source of samples: Buxton Museum

Authors of entry: Clive Waddington and Ceiridwen J. Edwards

References:

Waddington, C., Beswick, P., Brightman, J., Bronk Ramsey, C., Burn, A., Cook, G., Elliot, L., Gidney, L., Haddow, S., Hammon, A., Harrison, K., Mapplethorpe, K., Marshall, P., Meadows, J., Smalley, R., Thornton, A. and Longstone Local History Group. 2012. Excavations at Fin Cop, Derbyshire: An Iron Age hillfort in conflict? *Archaeological Journal* 169: 159–236.

Waddington, C. and Montgomery, J. 2017. Further excavations at Fin Cop and Stable Isotope analysis of the skeletons. *Derbyshire Archaeological Journal* 137: 22–65.

Fox Holes Cave, Ingleborough Hill, North Yorkshire, England, UK

Excavations at Fox Holes Cave in the Yorkshire Dales in 1913–14 yielded human remains associated with Neolithic and Bronze Age artefacts (Brodick 2016; Leach 2015). A human petrous temporal from the cave was successfully analysed for aDNA, yielding sample I3035 (male), thought to date to c. 4000–3500 BCE.

Source of sample: Selina Brace

Author of entry: Tom Booth

References:

Brodick, H. 1924. Fox Holes, Clapdale – a rock shelter. *Yorkshire Rambler's Club Journal* 5: 112–16.

Leach, S. 2015. *Going Underground: An Anthropological and Taphonomic Study of Human Skeletal Remains from Caves and Rock Shelters in Yorkshire*. Leeds: Yorkshire Archaeological Society.

Gravelly Guy, Stanton Harcourt, Oxfordshire, England, UK

Gravelly Guy is a multi-period settlement in the Thames Valley with occupation from the Late Neolithic to the Saxon period (Lambrick and Allen 2005). One of the major features of the site is an extensive Iron Age settlement comprising roundhouses, enclosures and numerous pits. Human remains were recovered from a minority of these pits and appear to cover the whole period of Iron Age settlement. They comprise principally neonatal individuals and mature adults.

Nine Middle Iron Age human petrous bones were successfully analysed for aDNA. These represent four crouched adult inhumations and five neonatal or infant burials. The crouched adult inhumations yielded sample I20582 (female), dating to 2190 ± 30 BP (SUERC-95003; 368–165 cal BCE), from burial 502/B/1, which contained a copper alloy strip; sample I21274 (female) from burial 2144/B/1; sample I21272 (male) from burial 1339, which contained a bone toggle; and sample I21271 (female) from burial 1133, which contained a shale spindle whorl.

The neonatal and infant burials yielded sample I20583 (male), dating to 2231 ± 30 BP (SUERC-95004; 387–201 cal BCE), from the crouched inhumation (1220/C/1) of a baby around 1–2 months old at death, deposited towards the base of a pit; sample I21275 (female) from a crouched neonatal burial (1371) in the middle fill of a pit associated with horse bones; sample I20584 (female), dating to 2153 ± 30 BP (SUERC-95008; 355–54 cal BCE), from the disarticulated bones of a neonatal individual (2118) found in the lower fill of a pit along with a perforated dog tooth; sample I21277 (male) from the burial (2169) of a baby aged a few weeks at death, placed at the base of a pit; and sample I21276 (female) from crouched neonatal burial 1424, from the middle fill of a pit.

Samples I20584, I21276 and I21277 are all second degree relatives of each other and all share the same mitochondrial haplogroup (K1a4a1). The most likely explanation is that these three individuals, who all died at or soon after birth, may have been half-siblings sharing the same mother. It is also possible, however, that one of them could have been the maternal uncle or aunt of the other two. All three lie within separate pits in the central part of the settlement area.

Source of samples: Oxford Archaeology

Author of entry: Ian Armit

Reference: Lambrick, G. and Allen, T.G. 2005. *Gravelly Guy: Excavations at Stanton Harcourt*. Oxford: Oxford University School of Archaeology.

Greystones Farm, Bourton-on-the-Water, Gloucestershire, England, UK

Greystones Farm is located within the Salmonsbury Camp hillfort, on the north-eastern edge of Bourton-on-the-Water. Salmonsbury Camp was excavated in the 1930s, with smaller excavations taking place from 2003. Two of the recent excavations were conducted by Cotswold Archaeology and Rubicon Heritage as part of plans to develop the site into a Conservation Site of Excellence (Barclay et al. in prep). These excavations focused on the interior of the hillfort and uncovered the remains of a roundhouse, several storage pits, and other features dating to the Roman period. Pottery recovered from the storage pits suggests that the site was occupied in the later Middle Iron Age, specifically the first–second centuries BCE. Articulated and disarticulated human remains were also recovered from some of the storage pits.

The petrous portions of temporal bones from two of these individuals were successfully analysed for aDNA. Sample I12785 (male) derives from Skeleton 285 (TB113): a complete articulated individual aged 6–11 years, who was deposited in a shallow pit with their hands over their pelvis and flexed so that their legs splayed awkwardly (with ankles pressed against lower legs). Sample I12791 (male) derives from Skeleton 259 (TB119), belonging to an individual aged 33–46 years who was deposited within the fill of a storage pit, with their head touching the pit side and their legs drawn up to their chest. Neither of the skeletons have been directly dated using absolute methods but, based on their associations, they are thought to date to the first–second centuries BCE.

Source of sample: Sharon Clough, Cotswold Archaeology

Author of entry: Tom Booth

Reference: Barclay, A., Busby, P. and Roper, S. in prep. Greystones Farm, Bourton-on-the-Water, Salmonsbury, Gloucestershire. *Transactions of the Bristol and Gloucestershire Archaeological Society*.

Grove Park Road, Weston-super-Mare, Somerset, England, UK

Human burials were excavated in the 1890s from the area of Grove Park Road, Weston-super-Mare, Somerset and donated to the local museum in 1891 by Ernest Baker (Anon 1891; Stephen Minnitt pers. comm.). A human petrous bone taken from an individual believed to derive from this assemblage yielded sample I21305 (male).

Source of sample: Somerset Museums Service

Author of entry: Ian Armit

Ham Hill, Somerset, England, UK

Ham Hill, near Yeovil in Somerset, is the largest hillfort in Britain (>88ha). The hill was enclosed as early as 800 BCE; its major multivallate ramparts were established around 400 BCE, with at least three phases of remodeling until the Early Roman Period. Human remains were recovered from the hill's north 'spur' during quarrying in the nineteenth century and in excavations by Harold St George Gray in the early twentieth century (Brittain 2016). More human remains have been recovered elsewhere from recent excavations of the hillfort's ramparts and interior, mostly dating to the Middle to Late Iron Age, around 400–100 BCE (McKinley 1999; Brittain et al. 2016).

Five samples (four human petrous bones and a tooth) obtained from the antiquarian excavations were successfully analysed for aDNA. Samples I19854 and I11994 derive from Gray's excavations but were archived as miscellaneous bone and their trench derivation is not known. The remainder come from the hill's north 'spur' quarry works for which general locations are recorded, but as incidental *ex situ* finds. The petrous bones yielded sample I19854 (female; GENLAB35); sample I11993 (female; A1766); sample I11994 (female; 104-10 1996) and sample I19855 (male; GENLAB36). An archival note attributes the latter sample to an 'infant found with pot in stone cist' (see Hensleigh Walter 1924). The tooth yielded sample I16593 (female), dating to 2216±30 BP (SUERC-94990; 382–197 cal BCE).

Seven petrous bones and a tooth from the recent excavations of the hillfort's interior were also successfully analysed for aDNA. Six of the petrous bones derived from semi-articulated and disarticulated body elements from the backfill of an enclosure ditch and yielded sample I19652 (female; context 5627; SF1296), dating to 2257±32 BP (SUERC-73829; 395–205 cal BCE); sample I19653 (male; context 5627; SF1299) and sample I19654 (female; context 6116), both dating stratigraphically to around 400–200 BCE; sample I19655 (female; context 5867) dating to around 400–1 BCE, which has not been included in the analysis due to mitochondrial contamination; and sample I19656 (male; context 6115) dating to 2226±30 BP (SUERC-73828; 387–198 cal BCE), with evidence of blunt-force trauma. The remaining human petrous bone derived from a crouched inhumation cutting the basal silts of the enclosure ditch, and yielded sample I19657 (female; context 1061), dating to 2163±29 BP (SUERC-73827; 356–59 cal BCE). The tooth, from the backfill of the enclosure ditch (context 1057) that overlay the inhumation, yielded sample I13680 (male), dating to 2203±26 BP (SUERC-73822; 366–176 cal BCE). The petrous bone that yielded sample I19856 (female; context 58) came from a

storage pit within a cluster of pits near to the enclosure and is dated by pottery to around 400–200 BCE.

A further petrous bone from a crouched inhumation (context 5631) from within another cluster of pits, dating to 2080 ± 27 BP (SUERC-74473; 173 cal BCE–cal CE 5), yielded sample I21315 (male).

Source of samples: Somerset Museums Service/Cambridge Archaeological Unit

Author of entry: Marcus Brittain

References:

Brittain, M. 2016. *Iron Age Human Bone in the Somerset Heritage Centre. An Interim Assessment*. Unpublished report.

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Harlyn Bay, St. Merryn, Padstow, Cornwall, England, UK

Harlyn Bay is the site of an Iron Age cist cemetery excavated between 1900 and 1906. Although not fully published, the site can be approximately dated from between 800 BCE and CE 43 based on the style of brooches recovered from the graves. The cemetery is exceptionally large, containing around 100 individuals buried in stone cists. Radiocarbon dating of one of the skeletons (BRAMS-1321) was undertaken as part of the Natural History Museum/University College London Wellcome-funded ‘Genetic adaptation to diet and disease, from the origins of agriculture to the present’ project, and returned an Early Iron Age result. Another skeleton not included in the current study was also dated to the Early Iron Age by the same project.

Later excavations, in 2014, exposed an Early Bronze Age cist containing the skeleton of a young woman. The cist was stone capped and possibly covered by a low mound of earth and sand (Jones and Mikulski 2015). No artefacts were recovered, but a large quartz-rich stone was found in the pit into which the cist was set.

Here, we report data for nine individuals: one Bronze Age and eight Iron Age. A petrous temporal from Skeleton 1, dating to 3751 ± 32 BP (SUERC-55908; 2285–2036 cal BCE), yielded sample I16424 (female). The Iron Age individuals yielded sample I12772 (petrous; male; SB553; 1900-36-9); sample I16439 (petrous; female; TRURI 1900-36-15); sample I16442 (neonatal or infant petrous; female; TRURI 1900-36-12); sample I16441 (petrous; female; TRURI 1900-36-14); sample I16440 (petrous; male; TRURI 1900-36-10); sample I16388 (petrous; female; TRURI 1900-36-11); sample I16380 (petrous; male; TRURI 1900-36-13); and sample I6769 (neonatal or infant petrous; male; SB551A; TRURI 1900-36-5), dating to 2455 ± 25 BP (BRAMS-1321; 754–416 cal BCE).

Source of sample: Sophie Meyer, Royal Cornwall Museum and Andy Jones, Cornwall Archaeology Unit

Author of entry: Claire-Elise Fischer

References: Jones M.A. and Mikulski R. 2015. After the storm: an Early Bronze Age cist burial at Harlyn Bay, Cornwall, 2014. *Cornish Archaeology* 54, 139–56.

Hazleton North, Cheltenham, Gloucestershire, England, UK

Hazleton North is a lateral chambered long cairn (SP 0727 1889) and is one of a pair of monuments (with Hazleton South). The northern long cairn was fully excavated between 1979 and 1982 (Saville 1990). Each of its two L-shaped chambers (northern and southern) were connected by short passages to entrances in the side wall (Meadows et al. 2007).

Modelling of the radiocarbon dates by Meadows et al. (2007: 61) suggests that activity associated with the construction and use of the stone cairn began in 3710–3655 *cal BCE* (95% probability), or in 3705–3670 *cal BCE* (68% probability). The end of the principal Neolithic use of the monument for burial was in 3635–3605 *cal BCE* (95% probability; *end of cairn phase*: Fig. 8), or in 3635–3615 *cal BCE* (68% probability), probably in the 3620s *cal BCE*. Burial occurred in the chambers for 15–75 years (95% probability), or for 30–65 years (68% probability), probably for two or three generations.

Over 9000 human bones and bone fragments were recovered from the Hazleton North excavations, representing a minimum number of 41 individuals (22 adults and 19 children). These comprised 8 adults and 8 children from the north chamber (including two articulated male skeletons, together with the burnt bones of at least one other adult male and a sub-adult in the north entrance), and 14 adults and 11 children from the south chamber (Rogers in Saville 1990: 182–7). The sub-adults from the chambers included one foetus each (Meadows et al. 2007, 46).

The predominant burial rite, until the later phases of activity, appears to have been the inhumation of complete bodies, which were periodically disturbed and disarticulated as subsequent bodies entered the tomb (Saville 2010: 13). Two skeletons from the north entrance were the only articulated bodies from the site: one was virtually complete (Skeleton 1; aged 30–40 years), while the other was missing large portions of the torso and the mandible (Skeleton 2) (Rogers 1990: 182). During post-excavation, loose bones in and around Skeletons 1 and 2 were attributed to a further adult (Individual A) and a child of six months (Individual B) (*ibid.*: 184).

In the north chamber, the children ranged from 6 months to 3–4 years, whilst in the south chamber they ranged from 1–15 years (Saville 1990: 186 and table 53). Meanwhile, in the north chamber, adults ranged from 17–45 years and in the south chamber from 25–45+ years (*ibid.*: 196 and table 55). Sex was difficult to determine within such a disarticulated assemblage, but a combination of pelvic and cranial assessment suggests the presence of between 2 and 3 males and 1 or 2 females in the north chamber, and 8 males and 2 females in the south chamber (*ibid.*: tables 57 and 58).

Eight petrous bones and three teeth were successfully analysed for aDNA. The petrous bones yielded sample I13890 (male; 7403); sample I13891 (male; 11062), dating to 4800±25 BP (PSUAMS-9672; 3640–3528 *cal BCE*); sample I13897 (male; 5120); sample I13899 (male; 8336); and sample I13889 (female; 10213), which derived from a correctly juxtaposed skull and mandible in the south chamber (context 412; *ibid.*: 95) and dates to 4895±25 BP (PSUAMS-9671; 3751–3636 *cal BCE*).

Sample I13893 (male; 5037-1), from a petrous, and sample I20820 (male; 5037), from a tooth, both derive from Skeleton 1 (5307; context 267) in north entrance, while sample I13898 (male; 5199) derived from a petrous from Skeleton 2 (ibid.: Fig. 118, 119), the lower portion of a disturbed crouched inhumation, also located in the north entrance (see above). A right femur (5037-32) from Skeleton 1 returned dates of 4600 ± 120 BP (OxA-643) and 4820 ± 70 BP (OxA-902) (Saville 1990: 237, Fig. 179), which, together with a further date of 4800 ± 50 BP (GrA-24504; 3653–3380 cal BCE; Meadows et al 2007: Table 1), combine to give a calibration of 3650–3380 cal BCE.

Meanwhile, a left femur (6672-16) from Skeleton 2 returned a date of 4840 ± 60 BP (OxA-903) which, together with a further date of 4850 ± 50 BP (GrA-24508; 3764–3521 cal BCE; Meadows et al 2007: Table 1), combine to give a calibration of 3700–3530 cal BCE. Sample I13892 (male; 5142), derived from a petrous from Individual G (aged 3–4 years) in the north chamber (context 336) (Saville 1990: Fig. 130 and Appendix 10), whose right femur (5463) yielded a date of 4940 ± 50 (GrA-24506; 3932–3637 cal BCE) (Meadows et al. 2007: Table 1). Since samples I13893 and I20820 represent genetic duplicates they have been merged for the purposes of reporting and analysis.

Two further teeth were sampled: the first, from the mandible and juxtaposed skull (5880) of an individual aged 17–25 years in the north chamber, yielded sample I21390 (female), dating to 4905 ± 25 BP (PSUAMS-9677; 3761–3637 cal BCE); while a loose tooth from the south entrance (3666/3978), belonging to an individual aged 35–45 years, yielded sample I21385 (male).

Sample I13892 is a second or third degree relative of I13890, while the individuals represented by samples I13890 and I21385 have a third degree or more distant relationship.

Source of samples: James Harris (Corinium Museum) and Vicki Cummings

Authors of entry: Lindsey Büster and Vicki Cummings

References:

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Hay Wood Cave, Mendip, Somerset, England, UK

Excavations at Hay Wood Cave yielded artefacts from the Mesolithic to the Romano-British periods along with 560 identifiable human bones corresponding to at least to ten individuals (eight adults, one adolescent under 15 years and one child). The human remains were, however, not directly associated with the artefacts. The results of an AMS dating programme (Hedges et al. 1997; Schulting et al. 2013) place the human remains in the Early Neolithic period. Here we report data for sample I6748, a juvenile right tibia associated with Cranium 1 (male; SB410B3), dating to 5052 ± 32 BP (OxA-19914; 3956–3769 cal BCE), though the data are excluded from the analysis due to mitochondrial contamination.

Source of sample: Margaret Chapman, Axbridge Museum

Author of entry: Claire-Elise Fischer

Reference:

Hedges, R.E.M., Pettitt, P., Bronk Ramsey, C. and van Klinken, G.J. 1997. Radiocarbon dates from the Oxford AMS system: Archaeometry datelist 24. *Archaeometry* 39: 247–62.

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Highsted, Sittingbourne, Kent, England, UK

Highsted is a large Late Iron Age inhumation cemetery excavated by D.T.A. Ponton in 1955. The excavation took place under emergency rescue conditions due to the imminent threat of chalk quarrying, with contemporary local newspaper articles recording that 20 inhumations and six cremation burials were recovered (Anon 1955). Shortly after excavation, however, most of the records, site photos, and associated finds were stolen (Kelly 1978, 267). The site was never published and the human remains were thought to be lost (Whimster 1981, 326). In 1987, the human remains were located and sent to Kent County Museums service, an accompanying letter outlining a provisional assessment of the material (Baxter 1987), but this too was never published and the material again forgotten. During data collection for doctoral research, however, skeletal remains from multiple individuals were identified at Maidstone Museum and reanalysed (Legge forthcoming). The remains were boxed, but had become mixed, with an MNI of 18 based on right femora.

Five human bones were successfully analysed for aDNA, one of which is reported here (the other four are too recent for this study): sample I18599 (metacarpal; female; K2114/H), dating to 1990±25 BP (PSUAMS-7826; 43 cal BCE–cal CE 110).

Source of sample: Maidstone Museum

Author of entry: Michael Legge

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Kingsdown Camp, Mells Down, Somerset, England, UK

Kingsdown Camp is a small, univallate, quadrilateral enclosure at Buckland Dinham, Somerset (Lewis and Mullin 1997, 177). Excavations during the 1920s indicated occupation during the Iron Age and early Roman periods, terminating in the second century CE (Gray 1930). Human remains were recovered from the ditch and elsewhere, some representing formal burials, along with a significant number of pre-Roman Iron Age objects. A burial was also found under a mound outside the hillfort (Gray 1930). A human tooth from this latter context (Skeleton M4) was successfully analysed for aDNA: sample I13682 (male), dating to 2527±30 BP (SUERC-94972; 793–544 cal BCE).

Source of samples: Somerset Museums Service

Author of entry: Ian Armit

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Gray, H. St G. 1930. Kingsdown Camp, Somerset, 1927. *Proceedings of the Somerset Archaeological and Natural History* 73: 130–132.

Lewis, J. and Mullin, D. 1997. Buckland Dinham, Kingsdown Camp, in Webster, C.J. and Croft, R.A. 1997. Somerset Archaeology. *Proceedings of the Somerset Archaeological and Natural History* 141: 171–192(177).

Lechlade Memorial Hall/Skate Park, Lechlade-on-Thames, Gloucestershire, England, UK

In 2017 excavations were undertaken at and around a Beaker-period barrow, which formed part of an extensive ceremonial and funerary complex focused upon a Neolithic cursus (Hood 2020). The remains of the barrow comprised a substantial ring ditch, with an associated ‘U shaped’ enclosure, at the centre of which was a deep burial pit containing an adult crouched inhumation. The individual was accompanied by various grave goods, which included a copper dagger, an amber bead, a flint and marcasite ‘strike-a-light’, and a finely made ‘Langdale stone’ bracer, as well as other items. Unusually, the burial was not accompanied by any Beaker ceramics. A total of four cattle head-and-hoof offerings were present within the upper part of the subsequent grave fill. An adjacent deep burial pit contained a probable contemporary or near contemporary older adult male inhumation, placed in the grave in an unusual inclined-supine or seated position, with extended legs. This individual was also associated with a cattle head-and-hoof offering, as well as other grave goods.

The barrow was subsequently the focus for further human burials, for a period of over 1500 years. At least four Late Bronze Age cremations were deposited in the in-filled ring ditch. A line of three Early Iron Age crouched inhumations, comprising an adult male and an adult female, as well as an adolescent male, were buried within the area defined by the ring ditch. An Early Iron Age crouched child burial was located approximately 50m to the east of the barrow.

Sample I12786 (male) came from the petrous portion of the temporal bone of the primary burial (Sk 1101; TB114). This burial has not been radiocarbon dated directly, but a tooth from the accompanying head-and-hoof deposit produced a date of 3769±27 BP (SUERC-80166; 2289–2052 cal BCE).

Samples I12783 (male; child; Sk 1124), sample I12787 (female; adult; Sk 1063; TB115) and sample I12935 (male; adult; Sk 1066; TB135) were taken from the petrous portions of temporal bones from the three Early Iron Age crouched inhumations. Sk 1124 and Sk 1063 have been

radiocarbon dated to 2510±29 BP (SUERC-80169; 783–541 cal BCE) and 2362±29 BP (SUERC-80168; 539–387 cal BCE) respectively.

Source of sample: Andrew Hood, Foundations Archaeology

Author of entry: Andrew Hood

Reference: Hood, A. 2020. *Report on Archaeological Investigations at Lechlade Memorial Hall and Skate Park, Lechlade, Gloucestershire. HER Archive Report No. 1359.*

Margetts Pit, Kent, England, UK

Margetts Pit is an extensive site with evidence for human activity spanning a broad temporal range from the Neolithic (a single pit), though the Middle to Late Bronze Age (mortuary and industrial activity), and into the Late Iron Age/Romano-British period, with evidence for settlement. The remains of both cremation and inhumation burials of Bronze Age date were recovered; samples were taken from three of the inhumation burials for aDNA analysis.

A human petrous bone and tooth were successfully analysed for aDNA. The petrous bone, from burial 984, yielded sample I13716 (female), dating to 3019±31 BP (SUERC-49774; 1391–1129 cal BCE); and the human tooth, from burial 409, yielded sample I13617 (female), dating to 2946±27 BP (SUERC-49770) and 2920±25 BP (PSUAMS-7561), with a weighted mean of 2932±19 BP (1214–1052 cal BCE).

A metacarpal from Skeleton 412 was also successfully analysed for aDNA: sample I13618 (female), dating to 2956±28 BP (SUERC-49769; 1261–1055 cal BCE).

Source of samples: Wessex Archaeology

Authors of entry: Jacqueline McKinley, Matt Leivers and Ian Armit

Marshall's Jaguar Land Rover New Showroom (JLU15), Cambridgeshire, England, UK

Excavations on the eastern side of Cambridge recorded the remains of a significant Early–Middle Iron Age settlement site (Evans et al. 2018, 427–30, fig. 6.22; Tabor 2019). Potentially representing an unbroken sequence of occupation, at least three distinct phases of activity representing a shift from Early Iron Age open settlement to Middle Iron Age enclosed settlement were identified. Amongst the site's features, some 488 pits produced large pottery and animal bone assemblages as well as human remains (both articulated burials and disarticulated elements).

Two human teeth and a phalanx from three burials contained within circular storage-type pits were successfully analysed for aDNA. Skeleton 583 (Burial F.226) was laid in a prone position with its legs tightly flexed and was accompanied by a complete pottery vessel; a tooth from this individual yielded sample I19044 (male), dating to 2221±25 BP (SUERC-97424; 381–199 cal BCE). Skeleton 1134 (Burial F.476) had been disturbed by later features but may originally have lain in a flexed position; a tooth from this individual yielded sample I19045 (male), dating to 2243±25 BP (SUERC-97428; 388–206 cal BCE). The phalanx, from another disturbed but probably originally flexed individual (Skeleton 1226; Burial F.511), yielded sample I19046 (male), dating to 2218±28 BP (SUERC-97429; 383–197 cal BCE).

Source of samples: Cambridge Archaeological Unit

Author of entry: Jonathan Tabor

References:

Evans, C., Lucy, S. and Patten, R. 2018. *Riversides: Neolithic barrows, a Beaker Grave, Iron Age and Anglo-Saxon Burials and Settlement at Trumpington, Cambridge*. CAU Landscape Archives/New Archaeologies of the Cambridge Region Series, Vol. I. Cambridge: McDonald Institute for Archaeological Research.

Tabor, J. 2019. *Excavations at The Marshalls Site, Newmarket Road, Cambridge 2015–16. An Archaeological Post-Excavation Assessment*. Unpublished, Cambridge Archaeological Unit Report No. 1423.

Meare Lake Village West, Somerset, England, UK

Meare Lake Village West is one of three Iron Age settlements constructed in the wetlands of the Somerset Levels (Bulleid and Gray 1948; Gray and Bulleid 1953; Gray 1966; Minnitt and Coles 1996). The site was first excavated in the early decades of the twentieth century and has been subject to more recent, smaller-scale excavation (Orme et al. 1981; Brunning 2013). It appears to date from 265–60 cal BCE, and comprises a series of mounds built along the edge of a raised bog (Cunliffe 2004, 269; Marshall et al. 2020). A human petrous from individual M17 was successfully analysed for aDNA: sample I11146 (male); AMS dating of this bone failed. Two human teeth were also successfully analysed for aDNA: sample I13684 (female) from individual M12, dating to 2373±30 BP (SUERC-94974; 541–391 cal BCE); and sample I13683 from individual M1 (female), dating to 2263±27 BP (SUERC-94973; 395–208 cal BCE). The latter sample has been excluded from the analysis due to its low coverage. The tooth of M12 ‘was found deep under mound XXXIV’ (Gray and Bulleid 1953, 407), which probably explains the early date.

Source of samples: Somerset Museums Service

Author of entry: Ian Armit

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Orme, B.J., Coles, J.M., Caseldine, A.E. and Bailey, G.N. 1981. Meare Village West. *Somerset Levels Papers* 7: 12–69.

Melton, East Riding of Yorkshire, England, UK

Excavations across a large area of landscape close to the village of Melton revealed a multi-period landscape of settlement and funerary remains (Fenton-Thomas 2011). These included several groups of human remains dating from the Early Bronze Age to the Early Medieval period (Cafell and Holst 2011). The Iron Age individuals comprised 21 inhumations including 9 adults and 12 children (including seven neonates).

Two bones were successfully analysed for aDNA. The crouched inhumation of a young adult (Ph 3B/1032), cut into the remains of an abandoned oval structure (Structure 17), yielded sample I0525 (female). This individual is a second degree relative of a previously published individual (M1489) from the same site (Martiniano et al. 2016) which has been dated to 2126±34 BP (Wk-21868; 349–46 cal BCE). A combination of stratigraphic position and the date for the close relative suggests a date for sample I0525 in the period c. 100 BCE–CE 50.

The crouched inhumation of an old/middle adult (Ph3B/1823), aged around 35–45 years at death and buried under a small square barrow (Barrow 2100), yielded sample I0527 (female). This characteristic Arras Culture burial was accompanied by the right fore-limbs of a pig. Based on the distinctive funerary rite, this individual can be dated to c. 400–100 BCE.

Source of sample: Oliver Craig

Author of entry: Ian Armit

References:

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Melton Quarry, North Ferriby, East Riding of Yorkshire, England

Excavations of a quarry extension close to the villages of Melton and North Ferriby revealed evidence for multi-period settlement and funerary activity (Evans 2018). An isolated grave located in the north-west corner of the site contained the poorly-preserved skeleton of a child (Skeleton 2032), around 3–4 years at death, who was buried in a crouched position (McIntyre et al. 2018, 79) and dated to 2883±32 BP (SUERC-66411; 1201–933 cal BCE). A tooth from this individual was successfully analysed for aDNA, yielding sample I7629 (male). Strontium isotope analysis of this individual is consistent with a local origin on the chalk (McIntyre et al. 2018).

This adds to palaeogenetic data for an Early Bronze Age individual (Skeleton 1009) from the same site (sample I7630; male), dating to 3458±27 BP (SUERC-72661, 1881–1689 cal BCE), published in Olalde et al. 2018.

Source of sample: Louise Loe

Author of entry: Lauren McIntyre, Louise Loe and Ian Armit

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Mile Oak, Brighton, Sussex, England, UK

Excavations at Mile Oak Farm were undertaken by Archaeology South East in 1989 to sample and date a series of presumed Iron Age and Romano-British field lynches and identify associated settlements. Amongst other things, the excavations revealed a series of terraces cut to accommodate structures, including roundhouses. One of these sites (Area D) included a pit (2705) that had been truncated by the terrace cut. The pit contained the unaccompanied complete articulated skeleton of an individual aged 17–35 years, buried in a highly flexed posture on their left side (Skeleton 2707; HA210862 (DUP)), from which the tooth was sampled for aDNA (sample I16616; female). The skeleton has been radiocarbon dated three times: to 2810±70 BP (GU-5675), 2960±100 BP (GU-5691) and 3057±28 BP (SUERC-95020; 1410–1227 cal BCE). Since the standard errors are so large for the first two determinations, the latter date has been used for the purpose of analysis. The stratigraphy of the site suggested that the pit had originally been used for storage when the associated roundhouse structure was in use. The woman may have been buried in the pit at the time the roundhouse was abandoned.

Source of sample: Andy Maxted, Brighton Museum

Author of entry: Tom Booth

Reference: Russell, M. 2002. Excavations at Mile Oak Farm. In D. Rudling (ed.) *Downland Settlement and Land-Use: The Archaeology of the Brighton Bypass*, 5–81. London: Archtype Publications.

Moulsecoomb, Brighton, Sussex, UK

Excavations during road building to the east of Wild Park in Moulsecoomb in 1928 uncovered the skeleton of an unaccompanied adult male (estimated at the time by Arthur Keith to be 60 year old). He had been buried 3–3.5 feet below the modern surface in a crouched position on his left side, facing north-east. The body had been placed on a sloping surface within ‘chalk drift’. The knees of the skeleton were touching a saucer-shaped hearth comprising charcoal covered by burnt chalk and flint nodules. The apparent presence of a hearth and the fact that the chalk drift had not been disturbed by the burial led to speculation that the body was originally placed on the sunken floor of a hut. The petrous portion of the temporal bone of this skeleton (R3207; TB171) yielded sample I14552 (male), which produced a Late Iron Age date of 2012±30 BP (SUERC-70741; 92 cal BCE–cal CE 110).

Source of sample: Andy Maxted, Brighton Museum

Author of entry: Tom Booth and Andy Maxted

Neats Court, Isle of Sheppey, Kent, England, UK

Neats Court is located on the Isle of Sheppey, on the northern coast of Kent (Morley and Booth 2015), and comprises a round barrow with construction and use in the Early and Middle Bronze Age. Following marine inundation in the Late Bronze Age or Early Iron Age, the site was modified to make it less susceptible to inundation and at least two more burials were inserted into the mound and surrounding ditch. Later quarries from the Late Iron Age or Early Roman period are also in evidence. Finally, a single articulated extended burial was inserted in the barrow in the Early Medieval period.

Excavation recovered the burial of 14 individuals, including both inhumations and cremations, the latter associated with Early and Middle Bronze Age pottery. Most of the inhumations in the barrow mound were buried in a crouched posture, suggesting they were broadly contemporary with the cremations. Radiocarbon dating of three of the crouched burials produced Early Bronze Age dates. Skeleton 3666, which had been buried within the marine transgression materials in the surrounding ditch, and plough-truncated Skeleton 2326 from the top of the mound produced Middle Iron Age radiocarbon dates. Here we report data for an articulated but tightly contracted individual (Skeleton 3545), aged >45 years, buried in the mound. The petrous portion of a temporal bone from this individual yielded sample I1774 (male), dating to 3437±36 BP (UBA-28373; 1879–1627 cal BCE).

Source of sample: Geoff Morley, MOLES Archaeology and Paul Wilkinson, Swale and Thames Archaeology

Author of entry: Claire-Elise Fischer

Reference: Morley, G. and Booth, T.J. 2015. *Neats Court: Report on the Scientific Analyses of the Inhumations from the Area C Mound*. Unpublished Swale and Thames Archaeology report, Faversham.

New Buildings, Stockbridge, Hampshire, England, UK

The site of New Buildings (HMCMS:A1990.30) was excavated in 1992 by Professor Barry Cunliffe. Excavations yielded northern and southern linear ditches systems, a southern road, three enclosures, an alignment of pits and three ring-ditches.

Some features appear to pre-date the earliest enclosure and/or linear ditches (Period 0), with the first concentrated activity (Period 1) represented by the Late Bronze Age construction of sub-rectangular Enclosure B and the southern road. Period 2 is dated from the Late Bronze Age or the Early Iron Age (c. eighth–seventh centuries BCE) and is represented by the northern linear ditch system. Period 3 (sixth century BCE) saw the extension of Enclosure B and the construction of Enclosure A. There is no evidence for activity after the fifth/fourth centuries BCE.

Excavations also yielded human remains of Late Bronze Age and Early Iron Age date. The Late Bronze Age human remains are represented by articulated bones, as well as three intact bodies. The Early Iron Age assemblage comprises isolated bones in pits, comparable to those recovered from Danebury. Eleven of the 13 excavated pits excavated yielded 47 structured deposits in total, with eight of the pits containing multiple deposits and three containing single deposits.

Here we report aDNA data derived from the petrous bones of three individuals: Skeleton 3 (NB92), a child aged around 5–6 years placed in a quarry scoop (F108(2)), yielded sample I17258 (female), dating to 2386 ± 26 BP (SUERC-66076; 542–396 cal BCE); an individual (NB92) in quarry scoop F117(2) Tr 2, yielded sample I17259 (male), dating to 2405 ± 25 BP (SUERC-66078; 725–400 cal BCE). Meanwhile, the cranial fragment of a child (NB92) in the upper fill of Early Iron Age pit P232(1) Tr 2, yielded sample I17260 (male).

Source of sample: Thomas Booth

Author of entry: Claire-Elise Fischer

Reference: Cunliffe, B. W. and Poole, C. 2000. *The Danebury Environs Programme: The Prehistory of a Wessex Landscape. Volume 2 - Part 4: New Buildings, Longstock, Hants 1992 and Fiveways, Longstock, Hants, 1996*. Oxford: English Heritage and Oxford University Committee for Archaeology Monograph No. 49.

North Bersted, Sussex, England, UK

Large-scale open area excavations by Thames Valley Archaeological Services Ltd, at North Bersted, Sussex revealed the remains of an isolated, extended inhumation grave containing a mature adult aged around 30–45 years at death (Taylor et al. 2014). The individual had been buried with an unusually rich assemblage of grave goods comprising an elaborate and unique bronze helmet, a sword and scabbard, shield, spearhead and a range of pottery vessels. The grave had been covered with what has been interpreted as the body of a wooden vehicle, represented by the remnants of iron bindings (Fitzpatrick 2020). The burial dates to the late La Tène period, around 150–50 BCE.

A petrous bone from this individual was successfully analysed for aDNA yielding sample I27379 (male).

Source of sample: The Novium Museum, Chichester

Author of entry: Ian Armit

References:

Fitzpatrick, A. 2020. A man who fought Caesar? *British Archaeology* 171: 21–2.

Taylor, A., Weale, A. and Ford, S, 2014. *Bronze Age, Iron Age and Roman Landscapes of the Coastal Plain, and a Late Iron Age Warrior Burial at North Bersted, Bognor Regis, West Sussex. Excavations 2007–2010*. Reading: Thames Valley Archaeological Services.

North Perrott Manor, North Perrott, Somerset, England, UK

Three Iron Age skeletons were excavated in 1997 in advance of construction of a sports hall at Perrott Hill School (formerly North Perrott Manor), Somerset. They appear to be associated with an industrial or craft-working area within a much larger Middle–Late Iron Age settlement (c. 450–100 BCE; Hollinrake and Hollinrake 1997). Petrous bones from two mature adults (>45 and 50 years respectively), buried in shallow circular pits, have been successfully analysed for aDNA: that from Skeleton 2 yielded sample I11144 (male), dating to 2035±30 BP (SUERC-94968; 149 cal BCE–cal CE 65); whilst that from Skeleton 3 yielded sample I11145 (male), dating to 2064±30 BP (SUERC-94969; 166 cal BCE–cal CE 14).

A further petrous bone, from badly plough-disturbed Skeleton 1, is awaiting analysis. Cranial fragments from a possible infant discovered in a pit (426) on the same site have not been sampled.

Source of samples: Somerset Museums Service

Author of entry: Lindsey Büster

References:

Anon. 1880. Donations. *Proceedings of the Somerset Archaeological and Natural History Society* 26: 86.

Hollinrake, C. and Hollinrake, P. 1997. *An Archaeological Excavation at Perrott Hill School, North Perrott: Fieldwork Report*. Unpublished report, Glastonbury.

Nunburnholme Wold, East Riding of Yorkshire, England, UK

Nunburnholme Wold is a prominent hilltop on the western escarpment of the Yorkshire Wolds near Pocklington, in the East Riding of Yorkshire. A cemetery of around 50 square-ditched barrows was revealed through aerial and geophysical survey to the east of and associated with a palimpsest of enclosures connected by drove ways, surrounding an ovoid open area of some 250x150m, at the hilltop's highest point (Halkon 2019). This feature was interpreted as a central meeting place for a whole region. Excavation was undertaken here in 2014 and 2015. A square-ditched barrow excavated in 2014 (Halkon et al. 2014) contained the skeleton of a female aged 45+ years, tightly crouched with her head to the north, placed within a box-like wooden structure with the remains of a suckling pig at her feet. This burial was dated to 2100±30 BP (Beta-516926; 334–42 cal BCE). A petrous bone from this individual (Barrow BE) was successfully analysed for aDNA and yielded sample I5503 (female).

In 2015, a further square-ditched barrow was excavated, 7m to the north of the 2014 burial, which contained the skeleton of a male aged between 17 and 22 years (Halkon et al. 2015). It too had been placed within some kind of wooden box or shuttering. With its head to the north and facing east, the corpse had been placed on its back and the knees may have been raised. Part of a young pig had been laid across this individual's lap. The provision of pork is usually taken as a mark of high status within Arras Culture burials. As in 2014, the bones themselves, which initially appeared to be quite robust, were found to be very fragile on lifting. This skeleton was dated to 2090±30 BP (Beta-520210; 196 cal BCE–cal CE 4). A petrous bone from this individual (Barrow D) was successfully analysed for aDNA and yielded sample I5502 (male).

Source of samples: Nunburnholme Community Heritage Project/University of Hull; AMS dating funded by Malcolm Lillie

Authors of entry: Peter Halkon, Malcolm Lillie and James Lyall

References:

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Halkon, P., Lillie, M.C. and Lyall, J. 2014. *The Archaeology of Nunburnholme Wold: An Interim Report 2015*. Nunburnholme Community Heritage Project and University of Hull.

<http://www.nunburnholmewithkilnwickpercypc.co.uk/nun2014interimwithcover.pdf>

Halkon, P., Lillie, M.C. and Lyall, J. 2015. *The Archaeology of Nunburnholme Wold: An Interim Report 2015*. Nunburnholme Community Heritage Project and University of Hull.

<http://www.nunburnholmewithkilnwickpercypc.co.uk/nunburnholmeexcavation2015.pdf>

Over, Cambridgeshire, England, UK

Disarticulated human remains from at least 16 individuals dating to the Iron Age were recovered on Godwin's Ridge: one of three, low-lying sand ridges on the floodplain of the River Great Ouse (Evans 2013; Evans et al. 2016, 513–24). During the Bronze and Iron Ages, these ridges were low-lying mid-stream islands, surrounded by marsh and palaeochannels. During the Late Bronze Age, a substantial settlement was established on the Godwin Ridge; with a minimum of five roundhouses, this had midden spreads and much associated pottery. Subsequent Iron Age activity appears to have retreated to the western edge of the ridge, by the channel, which was also where most of the disarticulated human bone was recovered. Iron Age activity was focused around an 'L'-shaped ditch enclosing a roundhouse and a cluster of shallow pits, with a riverside midden/ritual platform deposit nearby.

A human petrous bone from one of the Iron Age bone scatters (cat no. 10219) was successfully analysed for aDNA, yielding sample I11152 (male) dating to 2160±27 BP (OxA-24641; 355–59 cal BCE).

Source of sample: Cambridge Archaeological Unit

Author of entry: Christopher Evans and Rob Wiseman

References:

Evans, C. 2013. Delivering bodies unto waters: a Late Bronze Age mid-stream midden settlement and Iron Age ritual complex in the Fens. *Antiquaries Journal* 93, 55–79.

Evans, C., Tabor, J. and Vander Linden, M. 2016. *Twice-Crossed River: Prehistoric and Palaeoenvironmental Investigations at Barleycroft Farm/Over, Cambridgeshire*. Cambridge: McDonald Institute for Archaeological Research.

Pocklington (Burnby Lane), East Riding of Yorkshire, England, UK

The Iron Age cemetery at Burnby Lane, Pocklington was excavated by MAP Archaeological Practice between October 2014 and February 2017 in advance of a residential development. The site is situated in a valley bottom at the edge of the Yorkshire Wolds dip slope, at an elevation of c. 33m AOD (Above Ordnance Datum). In total, 85 ditched barrows were excavated at Burnby Lane, and 172 inhumations were recovered (Stephens and Ware 2020, 17). The inhumations themselves were generally poorly preserved and fragmented (ibid., 27).

The site is a palimpsest of burial activity spanning the Bronze Age, Iron Age and Anglian periods. Eighty-three barrows were identified in the Iron Age cemetery (Period 2), placing this site amongst the larger excavated cemeteries of the Arras Culture (c. 400–50 BCE). Whilst the barrows themselves were mainly square or rectangular in shape, seven circular barrows were also recorded. Additional detail in relation to the typological characteristics of the barrows at Pocklington can be found in Stephens and Ware (2020, 20–1), but, in summary, barrows of Groups 1–3 (after Dent 2010; Halkon 2013) were recorded, with Group 2 barrows numerically dominant (48 examples). A total of 72 primary burials survived, mainly interred in the crouched position but with both flexed and tightly contracted burials also identified. Coffin-like structures were identified in a number of cases, identified by sharply defined edges within grave features. These have been interpreted as self-supporting shuttered boxes. Grave goods were identified in 27 of the excavated graves, with brooches, bracelets, beads, and a single ‘food offering’ all recorded (Stephens and Ware 2020, 24–5).

In addition to the items above, a number of weapons burials were also identified at Burnby Lane. These included the burial of a (male?) individual (36–45? years old) who was placed on top of a rectangular shield; a (male) speared-corps burial of an individual aged 18–25 years, interred with sword; and a cart or chariot burial with two mature ponies in association (ibid., 26–7). The AMS dating of one of these ponies indicates barrow construction c. 250 cal BCE.

Petrous bones from 35 individuals have been successfully analysed for aDNA, providing sample I11033 (female; Sk89), dating to 2385±29 BP (SUERC-78046; 717–395 cal BCE); sample I11034 (female; Sk90); sample I12411 (female; Sk23a); sample I12412 (female; Sk2), dating to 2242±25 BP (SUERC-83069; 387–205 cal BCE); sample I12413 (male; Sk3); sample I12414 (female; Sk93); sample I12415 (female; Sk95); sample I13751 (female; Sk80); sample I13752 (female; Sk82), dating to 2136±25 BP (SUERC-83077; 346–53 cal BCE); sample I13753 (male; Sk86); sample I13754 (male; Sk87); sample I13755 (female; Sk100); sample I13756 (female; Sk107); sample I13757 (female; Sk109); sample I13758 (male; Sk116); sample I13759 (male; Sk129); sample I13760 (male; Sk142); sample I14099 (female; Sk11); sample I14100 (male) from an individual (Sk26) aged 36–45 years, dating to 2302±29 BP (SUERC-78040; 409–229 cal BCE); sample I14101 (female; Sk55); sample I14102 (male; Sk56a); sample I14103 (female; Sk58); sample I14104 (male; Sk59); sample I14105 (male; Sk61); sample I14106 (female; Sk63), dating to 2082±29 BP (SUERC-78041; 176 cal BCE–cal CE 6); sample I14107 (male; Sk66); sample I14108 (female; Sk62); sample I5504 (female; Sk110); sample I5505 (male; Sk113); sample I5506 (female; Sk119), dating to 2171±25 BP (SUERC-83079; 358–111 cal BCE); sample I5507 (female; Sk121), dating to 2243±24 BP (SUERC-83080; 387–206 cal BCE); sample I5508 (male; Sk57); sample I5509 (male; Sk78); sample I5510 (female; Sk83); and sample I5511 (male; Sk85).

Sample I12412 is a second or third degree relative of I5506. Sample I14105 is a second or third degree relative of I13751 and I5508, who is a second or third degree relative of I14108. Samples I14102 and I5509 are second or third degree relatives. Samples I13752 and I5511 are siblings.

Source of samples: MAP Archaeological Practice/University of Hull

Authors of entry: Mark Stephens, Paula Ware and Malcolm Lillie

References:

Dent, J.S. 2010. *The Iron Age in East Yorkshire*. Oxford: British Archaeological Reports, British Series 508.

Halkon, P. 2013. *The Parisi: Britons and Romans in Eastern Yorkshire*. Stroud: The History Press.

Stephens, M. and Ware, P. 2020. The Iron Age cemetery at Pocklington and other excavations by MAP, in P. Halkon (ed.), *The Arras Culture of Eastern Yorkshire – Celebrating the Iron Age. Proceedings of ‘Arras 200 – Celebrating the Iron Age’, Royal Archaeological Institute Annual Conference, 2017*, 17–31. Oxford: Oxbow.

Priddy, Somerset, England, UK

A juvenile female skeleton, aged around 11–12 years at death, was recovered from a pit near Priddy, Somerset in 1905 (O’Connell 2015). The skeleton was associated with five glass beads (now missing), and the body had apparently been weighed down by a stone to which it was tied by a rope of twisted fibre. At the time of discovery, the skeleton had preserved black plaited hair. A petrous temporal from this individual was successfully analysed for aDNA, yielding sample I5365 (female), dating to 2023±31 BP (SUERC-50796; 103 cal BCE–cal CE 107).

Source of sample: Selina Brace/Wells Museum

Author of entry: Tom Booth

Reference: O’Connell, L.E. 2015. *The Human Skeletal Remains from St Cuthbert’s Swallet, Priddy, Somerset*. Unpublished Report, Wells Museum.

Putney Foreshore, River Thames, London, England, UK

Hundreds of human crania have been dredged from the River Thames, particularly during the Victorian period, with most recent finds deposited in the Museum of London or the Natural History Museum (Bradley and Gordon 1988; Knüsel and Carr 1995). There are notable clusters of find spots for human crania along the river, the most prolific being Mortlake, Hammersmith and Kew, Walthamstow and Battersea. These foci partly relate to the frequency of dredging activity, but also parts of the river with high sedimentation rates or tight bends that ‘catch’ loose crania. Crania are highly mobile in an aquatic environment; it is difficult therefore to assess the significance of their disassociation from the post-cranial remains. They could reflect the remnants of various mortuary rites, including ‘water burial’ (involving the deposition of whole bodies in the river), the erosion of burials from the riverbank, or deposition of defleshed crania. Since most crania were not recovered from their original depositional contexts, they were not usually accompanied by dateable material, although in a few cases crania were tentatively associated with metalwork or stone tools. Radiocarbon dating programmes targeting the Thames skull collections have produced dates ranging from the Neolithic to historical periods (Knüsel and Carr 1995). There is, however, a concentration of later prehistoric dated crania, particularly from the Middle–Late Bronze Age and Iron Age.

Palaeogenetic data were obtained from sample I3083 (male; SB413B) deriving from the petrous portion of a disarticulated cranium (2004.97) recovered from Putney Foreshore, which produced a Middle Iron Age date of 2232±29 BP (OxA-14730; 387–201 cal BCE). This adds to palaeogenetic data from two Bronze Age crania from the River Thames reported in Olalde et al. (2018).

Source of sample: Rebecca Redfern, Museum of London

Author of entry: Tom Booth

References:

Bradley, R. and Gordon, K. 1988. Human skulls from the River Thames, their dating and significance. *Antiquity* 62: 503–09.

Knüsel, C.J. and Carr, G.C. 1995. On the significance of the crania from the River Thames and its tributaries (with comment by Richard Bradley). *Antiquity* 69: 162–9.

‘Racton Man’, Westbourne, Sussex, England, UK

The crouched inhumation of a robust adult was excavated near Westbourne, West Sussex, in 1989, following initial discovery by a metal detectorist. The individual, estimated to be around 45 years or older at death and 1.83m (6ft) tall, lay on their left side within a wooden coffin, and was accompanied by a bronze dagger (Needham et al. 2017). They had sustained two perimortem injuries to the right humerus, suggesting death in combat. A petrous bone from this individual was successfully analysed for aDNA yielding sample I27380 (male), dating to 3826±33 BP (SUERC-55526; 2453–2146 cal BCE).

Source of sample: The Novium Museum, Chichester

Author of entry: Ian Armit

Reference:

Needham, S., Kenny, J., Cole, G., Montgomery, J., Jay, M., Davis, M. and Marshall, P. 2017. Death by combat at the dawn of the Bronze Age? Profiling the dagger-accompanied burial from Racton, West Sussex. *The Antiquaries Journal* 97: 65–117.

Raven Scar Cave, North Yorkshire, England, UK (awaiting update)

Raven Scar Cave is located close to the summit of Ingleborough Hill in the North Yorkshire Dales. Substantial human and faunal bone assemblages were recovered from the cave floors (Lord 2013; Leach 2015). At least 15 individuals are represented amongst the human bone assemblage, but only 4 are represented by post-cranial material. This pattern of deposition suggested that cranial bones specifically had been selectively deposited in the cave. The largest proportions of human remains were recovered from the Main Chamber located immediately behind the cave entrance. Part of the Main Chamber had been deliberately sectioned off with large stones forming a cist-like structure. A narrow, twisting passage leads from the back of this chamber into the hillside.

The assemblages from the Main Chamber and front were dominated by juvenile cranial remains, particularly loose teeth. Eight disarticulated mandibles were distributed through the Main Chamber and passageway. At least two discrete depositional processes were suggested to be represented in these deposits. A limited number of whole bodies were subaerially exposed, possibly in the cave entrance or in a location outside the cave, before bones were transported to the rear passage. The overrepresentation of juvenile cranial elements, particularly teeth, suggests that heads of juveniles decomposed in the cave entrance before defleshed crania were removed, leaving the anterior dentition and mandibles behind. The mandibles were then distributed through the chamber and passageways through scavenger action. A discrete deposit of two disarticulated femora showing evidence for early post-mortem breakage may represent a third discrete depositional practice.

Finds (metalwork, pottery, stone tools) dating typologically to prehistoric and Roman periods were found throughout the cave, although it is unclear whether they were associated with the mortuary activity. Two human bones have been radiocarbon dated: a human humerus from the ‘carnivore accumulated’ assemblage which exhibited sharp-force trauma caused by a metal blade, and an isolated tooth from the Main Chamber. The bones produced statistically

indistinguishable Late Bronze Age dates of 2808±29 BP (OxA-13536) and 2832±29 BP (OxA-13535), which produce a combined calibrated date of 1025–911 cal BCE. This study includes palaeogenetic data from three teeth taken from disarticulated mandibles found on the floor of the Main Chamber and presumably dating to the same period. They yielded sample I12936 (female; SB486D, Mandible 5); sample I16467 (male; Mandible 2); sample I16469 (male; Mandible 1) and sample I16459 (indeterminate sex; F4).

The first two samples have been excluded from the analysis due to data quality issues. The individuals represented by samples I16459 and I16469 are second or third degree relatives.

These add to palaeogenetic data from a disarticulated cranium (Skull 1a) from the Main Chamber previously reported in Olalde et al. (2018).

Source of sample: Tom Lord, Lower Winskill Farm

Author of entry: Tom Booth

References:

Lord, T. C. and Howard, J. 2013. Cave archaeology. *Caves Karst Yorkshire Dales* 1, 239–51.

Leach, S. 2015. *Going underground: an anthropological and taphonomic study of human skeletal remains from caves and rock shelters in Yorkshire*. Leeds: Yorkshire Archaeological Society.

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Roedean Crescent, Brighton, Sussex, England, UK

Workmen digging a trench at the rear of 12 Roedean Crescent, Brighton (immediately north of Brighton Marina) in 1937 uncovered the skeleton of an adult male. The grave had been badly disturbed by the works, but the skeleton was believed to have been crouched on his right side

with his head to the south-west, facing south-east, and his hands in front of his face. No grave goods were recovered. The petrous portion of the temporal bone of this skeleton (R4267) yielded sample I14553 (male), which produced an Early Bronze Age date of 3535 ± 33 BP (SUERC-76360; 1954–1749 cal BCE).

Source of sample: Andy Maxted, Brighton Museum

Author of entry: Tom Booth and Andy Maxted

Rowbarrow, Wiltshire, England, UK

The site of Roundbarrow, Wiltshire was excavated by Wessex Archaeology in 2011–12. It yielded Early and Middle Bronze Age burials from a ploughed-out barrow, and an adjacent Early Iron Age inhumation cemetery, likely associated with the contemporary settlement of Little Woodbury, 200m upslope.

Four human petrous bones from Middle Bronze Age burials were successfully analysed for aDNA. The first, from an individual (4645) aged 30–40 years, laid in an extended south-east/north-west orientation on his right side under a densely packed deposit of flint nodules, yielded sample I19857 (male), dating to 3213 ± 28 BP (SUERC-41692; 1518–1425 cal BCE). The second, from an individual (4672) aged 40–50 years, laid in a flexed north–south orientation on his right side, yielded sample I19858 (male), dating to 3222 ± 28 BP (SUERC-41699; 1532–1431 cal BCE). The third, from the flexed burial of an infant (4663) aged c. 2.5–3.5 years and laid on its right side in a north-east/south-west orientation, yielded sample I19859 (male), dating to 3173 ± 29 BP (SUERC-41695; 1504–1403 cal BCE). Finally, the petrous of an infant (4679), aged 2–3 years and laid flexed on its right side in a north–south orientation, yielded sample I19860 (female), dating to 3169 ± 28 BP (SUERC-41700; 1503–1401 cal BCE). The individuals represented by samples I19859 and I19860 are second or third degree relatives.

Five human petrous bones from the Early Iron Age individuals were also successfully analysed for aDNA. That from an individual (4175) aged 30–40 years and placed in a flexed position on her right side in a north-west/south-east orientation, yielded sample I19861 (female), dating to 2506 ± 28 BP (SUERC-41683; 779–541 cal BCE). Another, from a woman (4243) aged 30–40 years, with an *in utero* foetus (4268) aged 32–34 weeks, yielded sample I19862 (female), dating to 2471 ± 28 BP (SUERC-41689; 767–423 cal BCE). She had been laid in a flexed position on her right side, with her head to the north-west; several large flint nodules lay on and around the skull. The third, from an individual (4513) aged 14–16 years, laid in a flexed position on their left side, with their head to the north, yielded sample I19863 (male), dating to 2359 ± 29 BP (SUERC-41690) and 2327 ± 28 BP (SUERC-47739), with a weighted mean of 2342 ± 21 BP (460–382 cal BCE). The grave fill included a redeposited bone from a second male aged over 18 years. The fourth petrous, from an individual (4651) aged 50–60 years, in a tightly flexed position on her left side with her head to the west, yielded sample I19867 (female), dating to 2507 ± 28 BP (SUERC-41693; 780–541 cal BCE). Finally, an individual (4653) aged 35–45 years in a flexed position on their right side, with their head to the west, yielded sample I19868 (male), dating to 2478 ± 28 BP (SUERC-41694; 771–476 cal BCE); the grave fill included the redeposited tooth of a presumably second adult individual.

Three human teeth from the Early Iron Age burials were also analysed. The first, from the disturbed burial of an individual (4001) aged 18–25 years, yielded sample I13688 (female), dating to 2492 ± 28 BP (SUERC-41682; 775–516 cal BCE). The second, from a tightly flexed individual (4178) lying on his right side with his head to the north-west, yielded sample I13689 (male), dating to 2448 ± 29 BP (SUERC-41684; 753–411 cal BCE). A number of flint nodules

overlay the skeleton, and the grave fill above this contained a pile of (mainly) long bone shafts, representing c. 5% of a second individual (4180) aged 18–25 years. The final tooth, which derived from the crouched burial of an individual (4574) aged 18–23 years, lying on their left side with her head at the north-east, yielded sample I13690 (male), dating to 2439±28 BP (SUERC-41691; 750–408 cal BCE). The fill of this grave also contained a fragment of redeposited bone from a second adult individual.

Source of samples: Wessex Archaeology

Author of entry: Lindsey Büster

Reference: Powell, A.B. 2015. Bronze Age and Early Iron Age burial grounds and later landscape development outside Little Woodbury, Salisbury, Wiltshire. *Wiltshire Archaeological and Natural History Magazine* 108: 44–78.

Saxon Way, Fairford, Gloucestershire, England, UK

Excavations were undertaken in 2014 at the site of Saxon Way, Fairford (Reynish 2014). A petrous temporal from Skeleton 3231, believed to derive from this site and thought to date to c. 400–100 BCE, was successfully analyzed for aDNA. This yielded sample I12926 (male).

Source of sample: Sharon Clough

Author of entry: Tom Booth

Reference: Reynish, S. 2014. *Land at Sunhill Close & Saxon Way Fairford Gloucestershire Archaeological Evaluation*. Unpublished Report, Cotswold Archaeology.

Scorton Quarry, North Yorkshire, England, UK

Archaeological excavations have taken place in advance of gravel quarrying in the area surrounding the Scorton Cursus Neolithic monument since the 1970s. At the northern edge of the quarry, a late Iron Age and Romano-British farmstead was excavated at Grange Farm in 1996–7 (Copp and Roe 1997). In 2007, topsoil stripping to the south-east of the farmstead revealed part of an associated field system. Lines of inhumation burials were arranged parallel to a ditch and a possible bedding trench for a hedge (Speed 2009). At least 21 probable or certain graves were identified although due to poor soil conditions few contained human remains. Radiocarbon dating subsequently showed that the burials were of Late Iron Age date dating from the second century BCE to early first century CE, although one group included a first century CE cremation burial containing hobnails (Speed and Holst 2018, 18–19).

Samples were taken from four of these skeletons: a tooth from skeleton 225 provided sample I19587 (male) dated 2084±31 BP (SUERC-52142; 195 cal BCE–cal CE 7); bone from skeleton 228 gave sample I19588 (female) dated 2067±31 BP (SUERC-52143; 168 cal BCE–cal CE 11); a petrous bone from skeleton 341 gave sample I14096 (male), dating to 2056±30 BP (SUERC-95019) and 2013±31 BP (SUERC-52144), providing a combined calibration of 101 cal BCE–cal CE 59 (2035±22 BP); and a petrous bone from skeleton 433 gave sample I14097 (male), dating to 2051±32 BP (SUERC-56654; 162 cal BCE–cal CE 26).

Source of samples: Northern Archaeological Associates Ltd

Author of entry: Greg Speed

References:

Copp, A. and Roe, A. 1997. *Archaeological Investigations, Scorton Quarry, Scorton, Richmondshire: Post-Excavation Assessment Report*. Unpublished, Field Archaeology Specialists Report.

Speed, G. P. 2009. *Scorton Quarry, North Yorkshire, Area 1A: Archaeological Monitoring and Excavation, Post-Excavation Assessment Report*. Unpublished, Northern Archaeological Associates Report 08-39.

Speed, G. P. and Evans, D. 2013. *Scorton Quarry, North Yorkshire. Area 4 Post-Excavation Assessment*. Unpublished, Northern Archaeological Associates Report No. 13-45.

Speed, G. P. and Holst, M. 2018. *Death, Burial and Identity: 3000 years of Death in the Vale of Mowbray. NAA Monograph Series 4: online report*: <https://doi.org/10.5284/1050910>. Barnard Castle: Northern Archaeological Associates Ltd.

Slonk Hill, Brighton, Sussex, England, UK

Rescue excavations on Slonk Hill, Brighton were undertaken by Brighton and Hove Archaeological Society in 1968–74 in advance of the building of a bridge over the River Adur. The excavations uncovered a small enclosed Iron Age settlement with occupation spanning the sixth–first centuries BCE and a later Romano-British settlement spanning the first/second–fourth centuries CE, incorporating two earlier Bronze Age barrows, as well as two Iron Age burials (Graves 1 and 2). Grave 1 comprised an oval-shaped storage pit containing the complete articulated skeleton of a male aged c. 24 years, flexed on his left side with his head to the north and his right hand in front of his face. The body had been placed on top of a layer of shells, mainly mussels, but also winkles and barnacles, which covered the bottom of the pit. The human remains were accompanied by a flint ‘Shepherd’s crown’ (a fossilised sea urchin) and some fragments of pottery dating typologically to the Iron Age. Further potsherds and the shaft of a small iron implement were recovered from the grave fill.

Grave 2 comprised a small purpose-built grave containing the skeleton of a female aged 35–45 years, buried flexed on her left side with her skull to the north, facing east. A shale bracelet was found on the left forearm and an involuted iron brooch was recovered from near her shoulder. The lower 23cm of grave fill included part of a quern stone and the right half of an ox sacrum.

The skeletons from Grave 1 and Grave 2 produced Middle Iron Age radiocarbon dates of 2246±30 BP (SUERC-70740; 391–203 cal BCE) and 2333±31 BP (SUERC-76365; 514–234 cal BCE), respectively. A tooth from the individual in Grave 1 (HATMP100001) yielded sample I7632 (male); while a petrous bone from the individual in Grave 2 (HATMP100348.2) yielded sample I14551 (female). aDNA analysis revealed that these two individuals are second or third degree relatives.

A further petrous bone from Grave 3 (HATMP100348.3) yielded sample I14550 (female). The skeleton was recovered from a rectangular grave cut into the chalk bedrock. It was in an extended position with the skull to the west, facing north, and was accompanied by a small iron knife. The typology of the knife, as well as the stratigraphic relationships between Grave 3 and other features on the site, indicate that the burial is probably Late Roman or Early Medieval in date.

Source of sample: Andy Maxted, Brighton Museum

Author of entry: Tom Booth and Andy Maxted

Reference: Hartridge, R. 1978. Excavation at the prehistoric and Romano-British site on Slonk Hill, Shoreham, Sussex. *Sussex Archaeological Collections* 116: 69–140.

Suddern Farm, Middle Wallop, Hampshire, England, UK (awaiting update)

Excavations at Suddern Farm (HMCMS:A1991.32) took place in 1991 and 1996 and yielded evidence for Iron Age and Roman settlement, as well as an Early–Middle Iron Age cemetery; this activity is contemporaneous with Danebury hillfort, 5km away. Excavations revealed at least 60 individuals buried in graves but it is estimated that several hundred further burials are present in the quarry (Cunliffe and Poole 2000). The skeletons from the Suddern Farm cemetery were recovered in various stages of articulation and were often accompanied by the partial remains of several additional individuals (Cunliffe and Poole, 2000). Excavation also revealed some post-decomposition activity such as cranial removal.

Here we report data for ten samples. Sample I16609 (male), dating to 2111 ± 31 BP (SUERC-60702; 341–46 cal BCE), derives from a right first metatarsal (SF96) from F.443; sample I16611 (male), dating to 2279 ± 31 BP (SUERC-60688; 401–208 cal BCE), was obtained from a right mandibular second molar (SF96/2) from F.455B; sample I17261 (male), dating to 2205 ± 32 BP (SUERC-60691; 372–175 cal BCE), was obtained from a left petrous bone (SF96/2) from F.446; and sample I17262 (female), dating to 2161 ± 32 BP (SUERC-60697; 357–57 cal BCE) was obtained from a left petrous (SF94) from F.441; sample I20987 (male) was taken from a left petrous (SF96) from F.439; sample I20986 (female) came from a left petrous (SF96/2) from F.447; sample I20985 (female) was obtained from a left petrous (SF96/2) from F.445A; sample I20984 (female) was taken from a left petrous (SF96) from F.453; sample I20983 (female) was taken from the right petrous bone of an infant (SF96) deposited in F.454; and sample I20982 (male) was obtained from a right petrous (SF96/2) from F.455, Burial A.

Source of samples: Ross Turle (Hampshire Cultural Trust) and Barry Cunliffe

Author of entry: Claire-Elise Fischer

Reference: Cunliffe, B. and Poole, C. 2000. *Suddern Farm, Middle Wallop, Hants., 1991 and 1996*. Oxford: English Heritage and Oxford University Committee for Archaeology Monograph No. 49.

Summerhill, Blaydon, Tyne and Wear, England, UK

Sample I2611 (male) derives from an adult tooth accessioned under MOA2015.18. The tooth was one of six attached to a mandible fragment stored in one of two boxes of remains from five cists from Summerhill and Bewes Hill along the south bank of the Tyne near Blaydon. The teeth appear to have been varnished or otherwise consolidated.

The cists at Summerhill included: a flexed burial with a Short-Necked Beaker (cist 1); a flexed burial with a flint knife (cist 2), from which the sample is thought most likely to derive; a flexed burial with a Food Vessel, with burnt bones and charcoal found on top of the cist cover slab (cist 3); and a flexed burial accompanied by other burnt bone fragments and a High-Bellied S-Profile Beaker (cist 4) (Gamble and Fowler 2013, 61–3).

The burial in cist 2 was oriented NNE–SSW and lay flexed on its left side with the flint knife behind the head. Due to some mixing of remains since excavation, it is alternatively possible that this mandible could come from cist 1 at Summerhill, or a cist at Bewes Hill which was discovered and excavated in 1939. There is little information on the Bewes Hill burial but the cist contained a fragment of a retouched flint blade, 6cm long (Fowler 2013, fig. 1.3).

A sample (I2610) from Summerhill cist 3 or 4, dating to 3515 ± 35 BP (Poz-83498; 1939–1743 cal BCE), is reported in Olalde et al. (2018); a second sample (I2420) was omitted from analysis

in the aforementioned study due to low data coverage. Another sample (I2608; MOA 1972.34 (Blaydon 15.16.1938)), on a petrous bone from this group of burials, and thought to derive from Bewes Hill, failed to yield a result.

All of the burials identified above are expected to date from the Early Bronze Age, so the Late Neolithic radiocarbon date of 4370 ± 35 BP (3090–2906 cal BCE; Poz-83500) on sample I2611 is much earlier than expected. While there are some Middle–Late Neolithic burials in cists, shafts or graves elsewhere in Britain and Ireland, none are known in this region. The use of a consolidant on the teeth may have resulted in contamination affecting the radiocarbon determination. The sample has therefore been excluded from the analysis.

Source of sample: Andrew Parkin, Great North Museum

Author of entry: Chris Fowler and Michelle Gamble

References:

Bulmer, W. 1938. Note on a Cist at Summerhill, Blaydon. *Proceedings of the Society of Antiquaries of Newcastle Upon Tyne* 15: 218–221.

Gamble, M. and Fowler, C. 2013. A re-assessment of human skeletal remains in Tyne and Wear Museums: results and implications for interpreting Early Bronze Age burials from Northeast England and beyond. *Archaeologia Aeliana* 42, 47–80.

Surrendon Road, Brighton, Sussex, England, UK

In 1928, a skeleton was discovered at ‘Maycroft’, 110 Surrendon Road, Brighton (the residence of a Dr M.C. Clutterbuck) during excavations for a tennis lawn. The skeleton was of a young adult female (c. 24 years old) buried in a circular, shallow grave. She had been buried in a contracted position on her left side with her skull to the south-east, facing north-east. No grave goods were recovered. The petrous portion of the temporal bone of this skeleton (R3016) yielded sample I16618 (female), which produced an Early Iron Age date of 2518 ± 30 BP (SUERC-70739; 787–544 cal BCE).

Source of sample: Andy Maxted, Brighton Museum

Author of entry: Tom Booth and Andy Maxted

Teversham (Marshall’s) Evaluation, Cambridgeshire, England, UK

A trial trench evaluation of land to the west of the village of Teversham, to the south of Cambridge, exposed part of an Iron Age ditched enclosure (Brittain 2017). Also identified by geophysical survey, sample excavation of the rectangular enclosure yielded small quantities of Early and Middle Iron Age pottery. A single inhumation (Skeleton 612/F268)—a flexed individual contained within a shallow, oval-shaped grave—was also recovered. No grave goods were present but radiocarbon dating confirmed its broad contemporaneity with the enclosure. A human petrous bone was successfully analysed for aDNA and yielded sample I11149 (male), dating to 2400 ± 30 BP (Beta-471582; 733–397 cal BCE).

Source of sample: Cambridge Archaeological Unit

Author of entry: Marcus Brittain

Reference: Brittain, M. 2017. *Land North of Cherry Hinton, Cambridge: An Archaeological Evaluation*. Unpublished, Cambridge Archaeological Unit Report No. 1374.

Thame, Oxfordshire, England, UK

Excavation of an Iron Age settlement area at Thame, Oxfordshire, recovered human remains (articulated, disarticulated and cremated) from a large number of pits, some within the main, eastern settlement area, some from a more dispersed area of activity in the western settlement area, and some concentrated within a nearby coombe (or dry valley) to the north. The site is currently being prepared for publication (Ellis et al. in prep.).

The site comprises three areas: the eastern settlement, the western settlement, and the coombe area. The largest was the eastern settlement, dating to the Early Iron Age, and this included over 280 pits, an enclosure, three penannular ditches and 10 four-post structures. Eight features produced human remains, including articulated, disarticulated, and cremated examples. Analysed Skeleton 1500 (sample I14801) had been deposited in two articulated segments that had been arranged in an unnatural position and was found with significant animal bone and pottery deposits, together with a human juvenile tooth. The tooth, which derived from cut 15512 and was associated with Early Iron Age pottery, failed analysis.

Activity at the western settlement was more limited and dispersed and continued into the Middle Iron Age. A Middle Iron Age jar was deliberately placed with the individual that was sampled from the western settlement: Skeleton 505 (sample I14806; female; tooth), dating to 2224±30 BP (SUERC-95014; 386–198 cal BCE).

The coombe area can be described as a cemetery, as contemporary non-funerary activity was very limited. The remains of probably 13 individuals were found in 10 or 11 cuts across an area measuring c. 14m x c. 24m. Six of these individuals, from four features, could be dated to the Early Iron Age by associated pottery. This includes sampled Skeletons 500 (sample I14808; female; tooth), dating to 2279±26 BP (SUERC-97422; 401–209 cal BCE) and 512 (sample I14809; male; petrous), dating to 2170±26 BP (SUERC-97423; 358–108 cal BCE). Four further individuals, none dated by associated pottery, were radiocarbon dated as part of this study. These comprised Skeleton 507 (sample I14800; male juvenile; petrous), dating to 2216±30 BP (SUERC-95009; 382–197 cal BCE); Skeleton 503 (sample I14804; female; petrous), dating to 2231±30 BP (SUERC-95012; 387–201 cal BCE); Skeleton 504 (sample I14807; male; petrous), dating to 2247±30 BP (SUERC-95018; 391–204 cal BCE); and Skeleton 509 (sample I14802; female; tooth), dating to 2256±30 BP (SUERC-95010; 393–206 cal BCE).

Bayesian modelling of these dates estimates that the coombe cemetery began 390–205 cal BCE (95% probability), probably 310–235 cal BCE (68% probability), and ended 365–185 cal BCE (95% probability), probably 280–205 cal BCE (68% probability). The model estimates that the cemetery was only in use for probably one or two generations: 0–110 years (95% probability), probably 0–40 years (68% probability).

These spans fall largely beyond the date usually thought to be the transition between the Early and Middle Iron Age: c. 350 cal BCE. Similar dates were obtained from two skeletons from the eastern settlement, both associated with Early Iron Age pottery. These are Skeleton 1503 (sample I14803; male; petrous), dating to 2204±30 BP (SUERC-95011; 370–175 cal BCE), and Skeleton 1500 (sample I14801; female; petrous), dating to 2184±27 BP (SUERC-97421; 362–163 cal BCE). Recent radiocarbon dating from other sites in the Thames Valley suggest that Early Iron Age pottery continued beyond c. 350 cal BCE (Gosden and Lock 2013; Hayden et al. forthcoming). The Thame burials, with the exception of Skeleton 505 (sample I14806) that was associated with Middle Iron Age pottery, belong to the ceramic Early Iron Age even

if absolute dates probably push them into the period that is elsewhere assigned to the Middle Iron Age.

Source of samples: Oxford Archaeology

Author of entry: Alex Davies

References:

Ellis, C., Boothroyd, J. and Davies, A. in prep. *Early Thame: Archaeological Investigations at Site F1, Thame, Oxfordshire, 2015*. Kemble/Oxford: Cotswold Archaeology/Oxford Archaeology Monograph.

Gosden, C. and Lock, G. 2013. *Histories in the Making. Excavations at Alfred's Castle 1998–2000*. Oxford: Oxford University School of Archaeology

Hayden, C., Simmonds, A., Lawrence, S., Woodley, K. and Masefield, R. Forthcoming. *Great Western Park, Didcot, Oxfordshire: Phase 1 Excavations, 2010–2012*. Oxford: Oxford Archaeology Thames Valley Landscapes.

Totty Pot, Cheddar, Somerset, England, UK

Totty Pot is a cave in the Mendip Hills located around 5km east of Cheddar village (Schulting et al. 2010). The cave was excavated by Christopher Hawkes, Willie Stanton and Wessex Cave Club between 1960 and 1965. The excavations uncovered a substantial collection of human and faunal bones as well as a small lithic assemblage dating typologically to the Mesolithic. A small excavation undertaken in 1998 by Gardiner and the University of Bristol found further Mesolithic stone tools as well as a few small sherds of pottery dating to Beaker, Bronze Age and Romano-British periods (Gardiner 2001).

Unfortunately, around half of the human bone assemblage was destroyed and the extant collection consists of just 60 identified elements. Representation of smaller skeletal elements as well as a lack of cortical weathering or scavenger gnawing suggests that individuals had been deliberately interred in the cave soon after death and decomposed in situ. At least six, but more likely seven, individuals are represented amongst the remains: three or four adults (possibly two males and two females), an older child (around 10 years old) and two young children (2–3 and 3–6 years old).

An adult left humerus and left femur (TP1) produced earlier Late Mesolithic radiocarbon dates of 8180 ± 70 BP (BM-2973) and 8245 ± 45 BP (OxA-16457), with a combined calibration of 7445–7080 cal BCE (Ambers and Bowman 2003; Schulting et al. 2010). However, radiocarbon dates from a further five long bones produced dates across the Neolithic. An adult left femur (TP6) produced an Early Neolithic date of 4706 ± 35 BP (OxA-16458; 3630–3370 cal BCE), whilst a right ulna from a 2–3 year old (TP2004.9/419) dating to 4498 ± 35 BP (OxA-16462; 3355–3035 cal BCE), an adult left femur (2004.9/68) dating to 4473 ± 35 BP (OxA-16459; 3340–3025 cal BCE) and a right femur from a 3–5 year old (TP'63) dating to 4442 ± 36 BP (OxA-16461; 3335–2930 cal BCE) are Middle Neolithic.

Palaeogenetic data from an undated loose tooth from an adult right maxilla (2004.9/419; SB403C2), yielded sample I3019 (male) which has been excluded from analysis due to low coverage. This adds to the data from a Late Neolithic left femur (TP 2004.9/257) which was reported by Olalde et al. (2018).

Source of sample: Wells Museum

Author of entry: Tom Booth

References:

Ambers, J. and Bowman, S. 2003. Radiocarbon measurement from the British Museum: datelist XXVI. *Archaeometry* 45: 531–40.

Gardiner, P.J. 2001. *The Mesolithic-Neolithic Transition in South-West England*. Unpublished PhD thesis, University of Bristol.

Schulting, R., Gardiner, P.J., Hawkes, C.J. and Murray, E. 2010. The Mesolithic and Neolithic human bone assemblage from Totty Pot, Cheddar, Somerset. *Proceedings of the University of Bristol Speleological Society* 25: 75–95.

Town Pasture, Thornholme, East Riding of Yorkshire, England, UK

In 2006, archaeological excavation was undertaken in advance of construction of a new water pipeline between Bridlington and Haisthorpe in the East Riding of Yorkshire (Westwood and Cooper 2007). The pipeline route crossed a landscape rich in remains largely known from aerial photography and including a well-preserved archaeological landscape dating to the later prehistoric and Romano-British periods. The excavations investigated a number of sites, amongst which were two Later Iron Age/Romano-British settlements at Great Kendale and Thornholme. The previously unidentified site at Town Pasture, Thornholme included a roundhouse which had been reconstructed several times. Adjacent to this were pits and a gully. These contained several neonatal or infant burials. A secondary phase included numerous ditches indicating a later phase of agricultural activity associated with Roman pottery and a coin. Skeleton 686, found in an unphased pit, was a foetus aged 9 months in utero. Petrous bone from this individual provided sample I22062 (male), dated 1997±31 BP (SUERC-52038; 50 cal BCE – cal CE 116).

Source of sample: Northern Archaeological Associates Ltd

Author of entry: Greg Speed

Reference: Westwood, B. and Cooper, O. 2007. *Bridlington to Haisthorpe Water Improvement Scheme: Interim Report*. Unpublished, Northern Archaeological Associates Report No. 07-81.

Tregear Vean, St. Mawes, Cornwall, UK

Tregear Vean is a hamlet located near the village of St. Mawes in Cornwall. The Royal Cornwall Museum in Truro holds human remains excavated from Tregear Vean, but unfortunately there is little associated archival material, and not much is currently known about the nature of its discovery or the burial context. The burial is thought to date to the Iron Age, although the basis for this date is uncertain without supporting materials. Sample I16453 (male) derived from a tooth (molar) associated with this skeleton (1967.31.1).

Source of sample: Sophie Meyer, Royal Cornwall Museum

Author of entry: Tom Booth

Tregunnel, Newquay, Cornwall, England, UK

Excavations at Tregunnel in 2014 uncovered a series of Iron Age burials. Three human petrous temporals were successfully analyzed for aDNA, yielding sample I12790 (female) from Skeleton 2877; sample I12792 (female) from Skeleton 2771; and sample I12793 (male) from Skeleton 7286. I12792 and I12793 are mother and son, and both are second or third degree relatives of I12790. All three are thought to date between 400–100 BCE.

Source of sample: Cotswold Archaeology

Author of entry: Tom Booth

Trethellan Farm, Newquay, Cornwall, UK

The site at Trethellan Farm comprises a Bronze Age settlement radiocarbon dated to the fifteenth–thirteenth centuries BCE and of an Iron Age inhumation cemetery dating the third century BCE–first century CE, based on metalwork accompanying burials (typically personal ornaments such as brooches belonging typologically to the La Tène III style) (Nowakowski 1991). A total of 21 grave pits were discovered but only 14 yielded in situ surviving human bone, representing a total of 18 individuals. Two graves contained double burials. Scattered disarticulated remains from additional individuals were recovered from the fills of some graves. Other graves contained the remains of single crouched skeletons buried in a north-south orientation.

Eight petrous bones were collected and analysed for aDNA from the Iron Age inhumation cemetery, yielding: sample I16390 (female) from Sk 3100 (1991.789.7); sample I16387 (male) from Sk 2200 (1991.78a.3); sample I16456 (female) from Sk 2128 (1991.789.8); sample I16457 (female) from Sk 2180 (1991.789.6); sample I16458 (male) from Sk 2077 (1991.78a.1); sample I16386 (female) from Sk 2118 (1991.78a.2); sample I16450 (male) from Sk 2080; and sample I16455 (male) from Sk 2119 (1991.789.5).

Source of sample: Sophie Meyer, Royal Cornwall Museum

Author of entry: Claire-Elise Fischer and Tom Booth

Reference: Nowakowski, J. 1991. Trethellan Farm, Newquay: the excavation of a lowland Bronze Age settlement and Iron Age cemetery. *Cornish Archaeology* 30: 5–242.

Trumpington Meadows, Cambridgeshire, England, UK

The Early Iron Age settlement phase at the multi-period site of Trumpington Meadows was dominated by a ‘pit cluster’ settlement, with over a thousand storage pits along with 16 four-post structures and up to ten roundhouses (Evans et al. 2018). Twelve burials were recovered in total: two in formal graves and the remaining ten from pits.

Five human petrous bones and one human tooth from six burials were successfully analysed for aDNA. All but one of the individuals were buried in pits, whilst Skeleton 904 was interred in a formal grave. The petrous bones yielded: sample I11153 (male), dating to 2291±29 BP (SUERC-49492; 405–209 cal BCE), which derived from a neonate (Skeleton 938; cat. 4785); sample I11154 (female), dating to 2422±25 BP (SUERC-41925; 743–404 cal BCE), which derived from the individual (Skeleton 904) interred in the formal grave (4520) and whose grave goods included a jet pendant and an iron bracelet; sample I13727 (female), dating to 2249±20 BP (SUERC-41926; 389–208 cal BCE), which derived from Skeleton 1165 (5834); sample I13728 (male), dating to 2214±30 BP (SUERC-49488; 381–179 cal BCE), which derived from Skeleton 900 (4591); and sample I13729 (female), dating to 2334±29 BP (SUERC-49494; 512–236 cal BCE), which derived from Skeleton 2327 (8540), which was lying in an awkward position with the torso twisted. The tooth, from Skeleton 1419 (6451), which was lying slightly prone in the pit, yielded sample I13687 (female), dating to 2200±30 BP (SUERC-49491; 368–173 cal BCE).

These add to existing data from this site provided by Early Bronze Age samples I3255 (Skeleton 3383) and I3256 (Skeleton 3384) and published in Oldade et al. 2018.

Source of samples: Cambridge Archaeological Unit

Author of entry: Christopher Evans, Ricky Patten and Rob Wiseman

Reference: Evans, C., Lucy, S. and Patten, R. 2018. *Riversides: Neolithic Barrows, a Beaker Grave, Iron Age and Anglo-Saxon Burials and Settlement at Trumpington, Cambridge*. CAU Landscape Archives/New Archaeologies of the Cambridge Region Series, Vol. I. Cambridge: McDonald Institute for Archaeological Research.

Varley Hall, Coldean Lane, Brighton, Sussex, England, UK

The remains of a Middle–Late Bronze Age settlement were uncovered in 1992 by South Eastern Archaeology during excavations on Coldean Lane in advance of the University of Brighton Varley Hall development (Greig 1997). Sample I16615 (female) reported here derives from a mandibular molar taken from an unaccompanied burial of an articulated individual aged 13–17 years in a flexed posture (HATMP100084/5). The burial was recovered close to the Middle–Late Bronze Age occupation layers. The remains were highly fragmentary and incomplete (<25% of the skeleton remaining), although this was likely the result of skeletal preservation rather than post-mortem manipulation. The skeleton has been radiocarbon dated to 2890±60 BP (BM-2919; 1259–912 cal BCE; Ambers and Bowman 2008).

Source of sample: Andy Maxted, Brighton Museum

Author of entry: Tom Booth

References:

Ambers, J. and Bowman, S. 1998. Radiocarbon measurements from the British Museum: datelist XXIV. *Archaeometry* 40(2): 413–435.

Greig, I. 1997. Excavation of a Bronze Age settlement at Varley Halls, Coldean Lane, Brighton, East Sussex. *Sussex Archaeological Collections* 135: 7–58.

Wattle Syke, West Yorkshire, England, UK

Rescue excavations at Wattle Syke were undertaken by Archaeological Services WYAS in conjunction with the A1 Bramham to Wetherby Upgrading Scheme between 2007 and 2008. A series of cropmark settlement enclosures and field systems were investigated, yielding a total of 57 individuals whose deposition spanned a thousand years (from the fourth–second centuries BCE to the sixth–seventh centuries CE) and are represented by: 2 skeletons from the Middle Iron Age (Phase 2a); 16 skeletons from the Late Iron Age (Phase 2b); 10 skeletons from the Early Roman period (Phase 3a); 3 skeletons from the Late Roman period (Phase 3b); 20 skeletons from a later phase of the Late Roman period (Phase 3b/c); 4 skeletons from the Late Roman period (Phase 3c); 1 Post-Roman skeleton (Phase 4) and 1 skeleton that could not be attributed to any particular phase (Martin et al 2013: table 37).

The Iron Age and Early Roman burials were predominantly confined to two groups (ibid.: Fig. 53): eight adults were located in Enclosure 12 (SK18, 22, 36–38, 57, 58 and 201), and another three (SK601, 636 and 721) in Enclosure 7. Meanwhile five young babies (SK50–54) were buried in pits within, nearby or cutting the ring-gully of Roundhouse 6 (Area 1). Five further burials (all babies) were located beneath Building 10 (Sk43), within Enclosure 10 (SK 40 and 41) and within Enclosure 5 (SK8 and SK9) (ibid., 41, 64). Interestingly, the proportion of neonate and infant burials at the site—72.2% of the buried population in the Iron Age (Phase 2) and all ten of the Early Roman (Phase 3a) population—is much higher than that represented by a ‘normal sample’ (Martin et al. 2013: 219). The Late Roman burials appeared as fairly uniform lined grave cuts distributed among a series of sunken-floored buildings (ibid., Fig. 79).

Five human petrous bones, one tooth and one carpal bone from Iron Age individuals were successfully analysed for aDNA.

Two individuals were sampled from a double grave: a tooth from SK37, aged at least 46 years, dating to 2040±30 BP (SUERC-27301; 151 cal BCE–cal CE 62), yielded sample I14360 (female); while a carpal bone from the other individual (SK38) in the grave yielded sample I14359 (male), aged 25–36 years, assumed to date to the Late Iron Age by association. The pair are first degree relatives. Sample I14360 has been excluded from the analysis due to evidence of contamination. Sample I14359 has not been included in the analysis because of evidence of mtDNA contamination. The identification of these individuals as first degree relatives is, however, secure.

Petrous bones from two intermingled neonatal skeletons were also sampled: that from SK40 yielded sample I14351 (female); and that from SK41 yielded sample I14352 (female). The individuals date to 2084±30 BP (SUERC-27314; 193–6 cal BCE). The pair were sisters, suggesting that this deposit represents the burial of neonatal twin girls. As the pair are first degree relatives, sample I14352 has been excluded from the analysis.

Three further petrous bones yielded sample I14347 (male), from SK22, dating to 2205±30 BP (SUERC-27303; 371–176 cal BCE); sample I14348 (female), from SK36, an individual aged 26–35 years, who appears to have been suffering from a lung infection when she died, dating to 2200±30 BP (SUERC-27302; 368–173 cal BCE); and sample I14353 (male), from SK18, dating to 2135±30 BP (SUERC-27295; 349–51 cal BCE).

Source of samples: Leeds Museums and Galleries

Author of entry: Lindsey Büster

Reference: Martin, L., Richardson, J. and Roberts, L. 2013. *Iron Age and Roman Settlements at Wattle Syke* (Yorkshire Archaeology 11). Leeds: West Yorkshire Archaeology Service.

Wick Barrow, Storgoursey, Somerset, England, UK

Wick Barrow (also known as Pixies' Mound or Burrow Sidwell) is a round barrow located in the parish of Stogursey, Somerset. It was excavated in 1907 by the Somerset Archaeological and Natural History Society with the Viking Club (Society for Northern Research) under the assumption that it belonged to the Viking or Anglo-Saxon period (Gray 1908). However, with the discovery of the first skeleton and an accompanying Beaker vessel, it became clear that the barrow was prehistoric and dated to the Beaker period. The excavators estimated that the barrow would have stood around 11 feet (3.3m) high and was surrounded by a stone walled enclosure. A depression at the top of the barrow suggested that it had been disturbed in antiquity, probably during the Roman period based on finds recovered from the barrow mound. Fragmentary disarticulated human remains and the possible remains of a cist found beneath this depression suggested that the primary burial had been discovered and disturbed at this time.

The grave containing Skeleton No. 1 was located slightly to the east of the centre of the barrow mound. Skeleton No. 1 was buried flexed on its left side in an earthen grave with its head to the north-west accompanied by fragments representing three-quarters of a Cord-Zone Maritime Beaker. The excavators believed that the Beaker had been buried incomplete. Further sherds of 'British pottery' and scattered human teeth were found near the skull. Slightly further north of Skeleton No. 1 was a large oval pit measuring 1.8m by 0.6m containing the commingled disarticulated remains of five adults and one child. The cranial fragments from this pit exhibited

impressions of textile. The excavators could not discern any order to this deposit and reburied many of these bones, considering them to be of little use.

The earthen grave containing Skeleton No. 2 was located slightly to the west of the centre of the mound and deeper than Skeleton No. 1, around 0.9m from the barrow surface. Skeleton No. 2 was buried tightly flexed on its left side with its head to the north. The skeleton was accompanied by a Wessex/Middle Rhine Beaker at its right shoulder and two flint knives close to the pelvis and the lumbar vertebrae respectively.

Skeleton No. 3 was recovered from an earthen grave just within but above the northern margin of the walled enclosure, around 1m below the surface of the mound. The skeleton was highly flexed on its right side with its head to the south. It was accompanied by a Wessex/Middle Rhine Beaker near the right tibia, as well as a group of stone tools, including two flint scrapers located between the legs and the axial skeleton. An additional fragmentary, incomplete and disarticulated adult female skeleton and the teeth of a child were recovered outside the barrow about 1m south of the walled enclosure. This skeleton was accompanied by small fragments of 'British pottery' and a sheep tooth. Several snail shells were recovered from inside the long bone shafts. None of the Wick Barrow skeletons have been dated using absolute methods, but their artefactual and monumental associations suggest that they date to the British Beaker period (c. 2400–2000 BCE). Sample I6776 was taken from a petrous temporal from Skeleton 1 (male; SB616A). This adds to the palaeogenetic data from Skeleton 2 reported in Olalde et al. (2018).

Source of sample: Amal Khreisheh, Somerset Heritage Centre

Author of entry: Tom Booth

Reference: Gray, H.S.G. 1908. *Report on the excavations at Wick Barrow, Stogursey, Somersetshire*. Taunton: Barnicott & Pearce.

Windmill Fields, Ingleby Barwick, North Yorkshire, England, UK

The Windmill Fields site is an area of the Ingleby Barwick housing development in the valley of the River Leven, on the southern edge of Stockton-on-Tees, North Yorkshire. It was excavated in 1996 by Tees Archaeology in advance of a housing development (Annis et al. 1997). The excavations revealed a flat grave cemetery including six burials containing the remains of at least eleven individuals. A diverse series of funerary traditions was represented by these burials and radiocarbon dating of the human remains suggest that there is a broad correlation between tradition and chronology, covering a period from the Chalcolithic to the Early Bronze Age. The oldest remains from the site were disarticulated and placed in a wooden cist. This style of deposition was followed by a tradition of unaccompanied single articulated burial. The latest style of burial comprises single articulated interments with grave goods.

Disarticulated unaccompanied incomplete skeletons representing at least two adult males (Sk 3 and Sk 4) were recovered from the remains of the wooden cist. Histological analysis of bone from Sk 3 suggested that these individuals had probably been defleshed by subaerial exposure. A disarticulated petrous temporal associated with Sk 3 (SB444B), dating to 3785±40 BP (OxA-8652; 2398–2041 cal BCE), yielded sample I3028 (male), which was excluded from analysis due to mitochondrial contamination. This adds to palaeogenetic data from four other burials from the site which were reported in Olalde et al. (2018).

Source of Sample: Robin Daniels, Tees Archaeology

Author of entry: Tom Booth

References:

Annis, R., Anderson, S., Bayliss, A., Bronk Ramsey, C., Huntley, J., Jones, J., Marshall, P., McGormac, F., Pearson, G., Rogers, P. Rowe, P. Sedman, K. and Vyner, B. 1997. *An Unusual Group of Early Bronze Age Burials from Windmill Fields, Ingleby Barwick, Stockton-on-Tees*. Unpublished report, Tees Archaeology.

Olalde, I., Brace, S., Allentoft, M.E., Armit, I., Kristiansen, K., Booth, T., Rohland, N., Mallick, S., Szécsényi-Nagy, A., Mittnik, A., Altena, E., Lipson, M., Lazaridis, I., Harper, T.K., Patterson, N., Broomandkoshbacht, N., Diekmann, Y., Faltyskova, Z., Fernandes, D., Ferry, M., Harney, E., de Knijff, P., Michel, M., Oppenheimer, J., Stewardson, K., Barclay, A., Alt, K.W., Liesau, C., Ríos, P., Blasco, C., Miguel, J.V., García, R.M., Fernández, A.A., Bánffy, E., Bernabò-Brea, M., Billoin, D., Bonsall, C., Bonsall, L., Allen, T., Büster, L., Carver, S., Navarro, L.C., Craig, O.E., Cook, G.T., Cunliffe, B., Denaire, A., Dinwiddy, K.E., Dodwell, N., Ernée, M., Evans, C., Kuchařík, M., Farré, J.F., Fowler, C., Gazenbeek, M., Pena, R.G., Haber-Uriarte, M., Haduch, E., Hey, G., Jowett, N., Knowles, T., Massy, K., Pfrengle, S., Lefranc, P., Lemerrier, O., Lefebvre, A., Martínez, C.H., Olmo, V.G., Ramírez, A.B., Maurandi, J.L., Majó, T., McKinley, J.I., McSweeney, K., Mende, B.G., Modi, A., Kulcsár, G., Kiss, V., Czene, A., Patay, R., Endrődi, A., Köhler, K., Hajdu, T., Szeniczey, T., Dani, J., Bernert, Z., Hoole, M., Cheronet, O., Keating, D., Velemínský, P., Dobeš, M., Candilio, F., Brown, F., Fernández, R.F., Herrero-Corral, A.-M., Tusa, S., Carnieri, E., Lentini, L., Valenti, A., Zanini, A., Waddington, C., Delibes, G., Guerra-Doce, E., Neil, B., Brittain, M., Luke, M., Mortimer, R., Desideri, J., Besse, M., Brücken, G., Furmanek, M., Hałuszko, A., Mackiewicz, M., Rapiński, A., Leach, S., Soriano, I., Lillios, K.T., Cardoso, J.L., Pearson, M.P., Włodarczak, P., Price, T.D., Prieto, P., Rey, P.-J., Risch, R., Rojo Guerra, M.A., Schmitt, A., Serrallongue, J., Silva, A.M., Smrčka, V., Vergnaud, L., Zilhão, J., Caramelli, D., Higham, T., Thomas, M.G., Kennett, D.J., Fokkens, H., Heyd, V., Sheridan, A., Sjögren, K.-G., Stockhammer, P.W., Krause, J., Pinhasi, R., Haak, W., Barnes, I., Lalueza-Fox, C., Reich, D., 2018. The Beaker phenomenon and the genomic transformation of northwest Europe. *Nature* 555, 190–6.

Winnall Down, Hampshire, England, UK

The later prehistoric settlement at Winnall Down (A1978.20), excavated in 1976 and 1977, was occupied from the Late Bronze Age to the second century CE (Fasham 1985). During the Middle Iron Age, the site was occupied by a series of roundhouses and appears to have been unenclosed, although the remains of an Early Iron Age enclosure still constrained its layout to some degree. Several inhumation burials and disarticulated fragments of human bone were associated with this period of the settlement.

Three human teeth from the inhumations were successfully analysed for aDNA: sample I19037 (female), from Skeleton 174 (juvenile; Phase 4, pit 4475); sample I19040 (female), from Skeleton 508 (Phase 4, quarry pit 8265); and sample I19042 (female) from Skeleton 629 (Phase 4, Grave 10312), dating to 2250±90 BP (HAR-2937; 715–48 cal BCE).

A further human tooth, from an unphased burial (Skeleton 650, Grave 11034) that may be of similar date to those above, was also analysed, yielding sample I19043 (female).

A further four samples failed analysis: these comprised a human tooth from Skeleton 505 (juvenile); and three human metatarsals from Skeleton 35, Skeleton 500 and Skeleton 574 respectively.

Source of samples: Hampshire Cultural Trust
Author of entry: Ian Armit and Derek Hamilton
Reference: Fasham, P. J. 1985. *The Prehistoric Settlement at Winnall Down, Winchester*. Winchester: Hampshire Field Club and Archaeological Society.

Woodingdean, Brighton, Sussex, England, UK

In 1934, a man digging a sun terrace at his house on Woodingdean Crescent Drive South uncovered a grave surrounded by a low dry wall of flint nodules/burnt flint. Inside the grave was the complete skeleton of a young adult female (c. 25 years old), buried in an extended prone position with her head turned to the right. The body had been covered in a layer or cairn of flint nodules. A few flint flakes were found in the grave itself, but no grave goods were recovered. The petrous portion of the temporal bone of this skeleton (R3706) yielded sample I14549 (female), which produced a Middle Iron Age date of 2279±31 BP (SUERC-76366; 401–208 cal BCE).

Author of entry: Tom Booth and Andy Maxted
Source of sample: Andy Maxted, Brighton Museum

Worlebury, Somerset, England, UK

Worlebury Camp, Somerset, is a large, multivallate Iron Age hillfort, located on a coastal promontory overlooking the Bristol Channel. It was subject to antiquarian excavations in the 1850s and 1880s and yielded a range of human remains from various contexts including storage pits and deposits relating to a potential massacre (Cunliffe 2004, 136; Dymond 1902). The specific contexts of the surviving human remains are unknown. Five human petrous bones were successfully analysed for aDNA: sample I11142 (male; a17 SID6), dating to 2103±27 BP (SUERC-94960; 197–44 cal BCE); sample I11143 (male; a22 SID7, box 20), dating to 2146±30 BP (SUERC-94961; 352–53 cal BCE); sample I11991 (male; Skull 15), dating to 2133±30 BP (SUERC-94962; 349–50 cal BCE); sample I11992 (male; Skeleton 19), dating to 2122±30 BP (SUERC-94963; 343–50 cal BCE); and sample I13726 (male; Skeleton 18), dating to 2141±30 BP (SUERC-94964; 351–52 cal BCE). Two teeth were also successfully analysed for aDNA: sample I16596 (male; Archtemp 51); and sample I13681 (male; Skeleton 21). Both these latter samples, however, have been excluded from the analysis due to their low coverage.

A further tooth from Skeleton 6 failed analysis, while three further samples which were successfully analysed for aDNA were found to represent duplicates of samples I11991, I11992 and I13726.

Source of samples: Somerset Museums Service
Author of entry: Ian Armit
References:

Cunliffe, B.W. 2004. *Iron Age communities in Britain* (4th edition). London: Routledge.
Dymond, C.W. 1902. *Worlebury, an ancient stronghold in the County of Somerset*. Bristol: Crofton Hemmons.

Football Field, Worth Matravers, Dorset, England, UK

Worth Matravers is a multi-period hilltop site close to Chapman's Pool on the south-central coast of England. It was excavated by the University of Southampton between 1990 and 1993 (Graham et al. 2002), and then as a student training project by East Dorset Antiquarian Society from 2008 to 2011 (Ladle 2018), prior to the building of community housing on part of the site.

Evidence has been found of an Early Neolithic enclosure; Bronze Age and Iron Age settlement, including a midden deposit from the Late Bronze Age–Iron Age transition; Roman buildings; and a post-Roman cemetery. Several inhumations were identified from the Iron Age, Roman and post-Roman periods.

A lower left M1 tooth from a ‘Durotrigian style’ Late Iron Age crouched inhumation (Ladle 2018, 58) was successfully analysed for aDNA. Skeleton 320 (CE049) yielded sample I20615 (female). The skeleton was dated by context to c. 100 BCE–CE 50 (Ladle 2018, 303).

Source of sample: Bob Kenyon

Author of entry: Bob Kenyon

References:

Graham, A.H., Hinton, D.A. and Peacock D.P.S. 2002. The Excavation of an Iron Age and Romano-British settlement in Quarry Field, south of Compact Farm, Worth Matravers, Dorset, in D.A. Hinton (ed.), *Purbeck Papers*. University of Southampton, Department of Archaeology Monograph No. 4, 1–83. Oxford: Oxbow.

Ladle, L. 2018. *Multi-period Occupation at Football Field, Worth Matravers, Dorset*. Oxford: British Archaeological Reports (British Series) 643.

Yarnton, Oxfordshire, England, UK

Large-scale landscape excavations at Yarnton, in the Thames Valley, Oxfordshire, revealed multi-period settlement and funerary activity (Hey et al. 2011; 2016). Part of the area included an extensive Iron Age settlement, comprised principally of post-built structures and around 1000 pits, associated with a small inhumation cemetery of around 35 individuals with dates centred on the third century BCE. Samples for aDNA were obtained from sixteen individuals from this cemetery, an earlier Iron Age inhumation nearby and two Bronze Age individuals. Information on the Iron Age burials is derived from the skeletal report in the site monograph (Boyle 2011).

The Iron Age cemetery is divided into a North and South Group. Four petrous bones and three teeth were successfully sampled for aDNA from individuals in the North Group. The petrous bones yielded sample I20588 (male), dating to 2207±21 BP (UB-3778; 366–197 cal BCE), from crouched adult inhumation 2717; sample I20589 (male) from juvenile inhumation 2714; sample I21179 (female), dating to 2224±21 BP (UB-3779; 381–201 cal BCE) from adult inhumation 2713; and sample I21178 (female) from adult supine inhumation 2720.

The three teeth yielded sample I19207 (male), from crouched juvenile inhumation 2718, dating to 2234±20 BP (UB-3920; 382–205 cal BCE); sample I19210 (female), from extended adult inhumation 2710, dating to 2168±21 BP (UB-3919; 355–118 cal BCE); and sample I19211 (male), from juvenile inhumation 2719. A further tooth from crouched adult inhumation 2569, dating to 2220±23 BP (UB-3924; 385–195 cal BCE), failed analysis and is not reported here.

Two petrous bones and a tooth were sampled from individuals in the South Group. The petrous bones yielded sample I20586 (male) from adult inhumation 2022; and sample I21180 (male), dating to 2268±20 BP (UB-3922; 396–209 cal BCE), from crouched juvenile inhumation 2069. The tooth, from adult inhumation 2026, yielded sample I19209 (male), but is excluded from the analysis due to low coverage.

Three further petrous bones were sampled from Middle Iron Age outlier burials: adult inhumation 1681 (unknown position and orientation), which yielded sample I20587 (male), dating to 2250 ± 21 BP (UB-3776; 389–208 cal BCE); context 376, which yielded sample I21182 (male; it is uncertain whether this sample relates to a crouched adult burial or a disarticulated adult, both buried in the same pit); and adult inhumation 133 which yielded sample I21181 (male).

A petrous bone from an individual (skull 8592) buried in an Early Iron Age pit at Cresswell Field, to the west of the main Yarnton excavations, yielded sample I20585 (female).

Two additional samples from earlier periods have also been successfully analysed for aDNA. A tooth from skeleton 8784 yielded sample I2446 (female), dating to 3815 ± 40 BP (OxA-8807; 2454–2139 cal BCE). This individual was an adult, placed in a shallow grave, probably crouched, with her head to the south. There was some evidence of osteoarthritis in the thoracic vertebrae. The grave was found unexpectedly during machine stripping, and the burial had been disturbed (Hey et al. 2016, 179). A petrous bone from skeleton 9345 yielded sample I2448 (male), dating to c. 1500–1000 BCE. This individual was a young adult, aged 18–25 years, and was lying tightly crouched on his right side in a shallow grave cut into the uppermost fill of a Neolithic long enclosure on the Yarnton floodplain. The skeleton was in poor condition and there was insufficient collagen for a radiocarbon date. A few sherds of possible Deverel-Rimbury pottery were found in the grave and other Middle and Late Bronze Age features lay nearby (Hey et al. 2016, 439).

Source of samples: Oxford Archaeology

Author of entry: Ian Armit and Gill Hey

References:

Boyle, A. 2011. Human remains, in Hey, G., Booth, P. and Timby, J., *Yarnton: Iron Age and Romano-British Settlement and Landscape: Results of Excavations 1990–98*, 469–86. Oxford: Oxford Archaeology.

Hey, G., Bell, C. Dennis, C. and Robinson, M. 2016. *Yarnton: Neolithic and Bronze Age settlement and landscape*. Oxford: Oxford Archaeology.

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FRANCE

Beg-er-Vil, Quiberon, Morbihan, France

The site of Beg-er-Vil was a chance discovery by workers flattening a sand dune in 1886 (Nicolas 2016). The site was studied by Gustave de Closmadeuc (1886) who sketched the stone cists and the numerous ceramic fragments that were found around them. The ceramics were then studied by Quentin Favrel and all seem to date to the Early Bronze Age. Other stone cists had previously been found in the area (in May 1868) and excavated by Gustave de Closmadeuc (1868). Abbot Pierre Lavenot (1883) also led a survey campaign across the whole Quiberon peninsula in the 1870s.

Three samples (all from long bones) were successfully analysed for aDNA: sample I16791 (male), dating to 3460 ± 25 BP (PSUAMS-9422; 1881–1691 cal BCE) derives from Skeleton 2376; sample I16792 (female) from Skeleton 2377; and sample I16782 (male) from Skeleton 2367. The individuals from which samples I16791 and I16792 derive are first degree relatives.

Source of samples: Ron Pinhasi, Olivia Cheronet and Christophe Le Pennec (Musée de Vannes)

Authors of entry: Claire-Elise Fischer and Olivia Cheronet

References:

(de) Closmadeuc, G. 1868. 'Découverte de sept tombeaux en pierre à Quiberon', *Bulletin de la Société polymathique du Morbihan*: 9–16.

(de) Closmadeuc, G. 1886. 'Découverte de stone-cists à Bec-er-Vill (Quiberon)', *Bulletin de la Société polymathique du Morbihan*: 3–17.

Lavenot, Abbé. P. 1883. 'Les îles d'Hoedic et d'Houat et la presqu'île de Quiberon. Étude géographique et archéologique (suite)', *Bulletin de la Société polymathique du Morbihan*: 6–19.

Nicolas, C. 2016. 'La fin d'un monde? La région de Carnac du Campaniforme à l'âge du Bronze ancien', *Bulletin de la Société polymathique du Morbihan* 142: 41–77.

Burthecourt, Salonnnes, France

The site of Burthecourt is characterised by a briquetage industry, which began in the Iron Age (Hallstatt C), and lasted until the end of the Gauls' independence. This vast zone of the Seille valley (Saulnois) is particularly well suited for the extraction of salt, which itself is fundamental for the preservation of foodstuffs. The vestiges of this intensive activity (detected since the start of the seventeenth century CE by the engineer F.-F. Le Royer d'Artézé de la Sauvagère) cover an area of around 120ha between the villages of Marsal, Moyenvic, Vic-sur-Seille, Salonnnes, la butte de Châtry between Vic and Moyenvic and the castle of Burthecourt in the municipality of Salonnnes.

The briquetage (vessels and clay sticks) and human remains assemblage, curated by the Cour d'Or-Metz Metropole museum, were recovered during excavations in 1901. J.B. Keune, then curator of the Metz museum, led excavation of a series of test trenches on the site of Burthecourt that allowed for the first reconstructions of the briquetage techniques employed (Keune 1901). This subsequently enabled Jean-Paul Bertaux, between 1969 and 1976, to draft a typology of the salt moulds (Bertaux 1976).

Since the beginning of the 2000s, new research has been taking place on the site under the direction of Laurent Olivier. One of the elements of this multidisciplinary programme, other than to establish the spatial extent and the internal organisation of this salt production site (Olivier 2012), is to evaluate the environmental impact of this industrial activity on the landscape.

In this context, fine-grained analyses by a number of experts have provided essential data about the daily lives of the salt workers within this environment, as well as on inter-relationships between humans and the salt-producing environment. At the end of the 2005 field season, a residential zone in the immediate proximity of the salt production sites in Burthecourt was uncovered (HaC–D2–3). It was revealed that the workers also performed agricultural activities as well as the probable raising of domestic animals (sheep, cattle and pigs).

In Marsal, a group of burials from Bensale (with individuals dating from the fifth century BCE) provided important information regarding the correlation between residences, agricultural

areas, workshops and necropolises. Older findings have revealed the existence of burial sites in proximity to briquetage zones. Despite their earlier date (2000–800 BCE), the human bones curated by the Cour d’Or-Metz Métropole museum could therefore be associated with the first settlements of salt workers in Burthecourt at the time of the discovery of the site’s economic potential.

A petrous bone from Skeleton 2547 yielded sample I16184 (male).

Source of samples: Ron Pinhasi and Olivia Cheronet

Author of entry: Olivia Cheronet and Claire-Elise Fischer

References:

Bertaux, J.-P. 1976. L’archéologie du sel en Lorraine. “Le Briquetage de la Seille” (état actuel des recherches), in J.-P. Millotte, A. Thevenin and B. Chertier (eds), *Livret guide de l’excursion A7 Champagne, Lorraine, Alsace, Franche-Comté, 9^e Congrès de l’Union Internationale des Sciences Préhistoriques et Protohistoriques*, 64–79. Nice: CNRS.

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Olivier, L. 2012. The Briquetage de la Seille (Moselle, France): an Iron Age proto-industrial salt extraction centre, in A. Kern, J. Koch, I. Balzer, J. Fries-Knoblach, K. Kowarik, C. Later, P. Rams, P. Trebsche and J. Wiethold (eds), *Technologieentwicklung und-transfer in der Hallstatt- und Latènezeit. Actes du colloque de l’AG Eisenzeit et du Naturhistorischen Museum de Vienne de Hallstatt (2009)*, 31–44. Langenweissbach: Beier & Beran, Beiträge zur Ur- und Frühgeschichte Mitteleuropas 65.

Faux-Vesigneul, Chemin de Coupetz, Marne, France

Faux-Vesigneul is a site located in north-eastern France, in the Marne department. Due to a project to build agricultural structures for animal keeping and because of legal obligations according to French law, an archaeological excavation of the site was performed during the summer of 2018. This archaeological operation (the final report for which is currently in preparation) covered an area of 17,000m. It included excavation of a funerary assemblage from the later Iron Age, ranging from the La Tène B2/C1 period (c. 300–200 BCE; for the inhumations) to La Tène D (for the cremations). They are spread across two quadrangular enclosures, two circular enclosures, one inhumation area, and a cremation area. Among these, 36 burial pits and 9 urns were recovered. This represents a total of 30 individuals of which 25 are adults (or of adult size), 3 are immature and 2 are of indeterminate age and sex.

Here we report data for 21 individuals which have been successfully analysed for ancient DNA.

Eight samples were obtained from petrous bones: Burial 210b (P5957) yielded sample I19356 (male); Burial 171 (P5958) yielded sample I19357 (female); Burial 109 (P5974) yielded sample I19363 (male); Burial 160 (P6412) yielded sample I20816 (male); Burial 208 (P6413) yielded sample I20817 (male); Burial 212 (P6683) yielded sample I21931 (female); Burial 103 (P6411) yielded sample I20815 (female); and Burial 129 (P6675) yielded sample I21402 (male).

Seven samples came from teeth: Burial 108 (P5959) yielded sample I19358 (male); Burial 170 (P5960) yielded sample I19359 (male); Burial 110 (P5973) yielded sample I19362 (female); Burial 172 (P5954) yielded sample I20827 (male); Burial 168 (P5955) yielded sample I20828 (male); Burial 162 (P6677) yielded sample I21399 (male); and Burial 165 (P6678) yielded sample I21403 (male).

Seven samples were extracted from long bones: Burial 142 (P5961) yielded sample I19360 (male); Burial 138 (P5962) yielded sample I19361 (male); Burial 104 (P6394) yielded sample I120811 (female); Burial 136 (P6395) yielded sample I20812 (male); Burial 137 (P6396) yielded sample I20813 (female); Burial 161 (P6676) yielded sample I21400 (male); and Burial 207 (P6681) yielded sample I21401 (female).

The individuals providing samples I19358, I19362, I19360 and I19363 represent first degree relatives: samples I19358 and I19362 are the sons of I19363, and I19360 is the brother of I19363.

Samples I20812 and I20813 are first or second degree relatives.

Samples I21399 and I21403 are father and son. Sample I21399 is a second degree relative of I21400 and a third degree relative of I20815. Sample I21400 is a second degree relative of I20815 and I21403. Samples I21403 and I20815 are third degree or more distant relatives.

Source of samples: Ron Pinhasi, Olivia Cheronet, Christèle Baillif-Ducros (Inrap) and Sylvain Canet (Inrap)

Authors of entry: Claire-Elise Fischer, Olivia Cheronet and Christèle Baillif-Ducros (Inrap)

Martincourt, Meurthe-et-Moselle (54), France

On the left bank of the Esch river, 1200m east of the village of Martincourt (Grand-Est, Meurthe-et-Moselle), a 2.4m high fissure within a fault system, noticed by a hunter in 1940, gave access to a cave 6m long, 2m wide and 3m high. In 1955, the cave was cleared by speleologists Mr. and Mrs. Klag, who found a Late Bronze Age IIb Urnfield burial dated to 1150–950 BCE (De Laet et al. 1958). Sample I16247 (male) derives from the petrous bone of this individual, dating to 4055±30 BP (PSUAMS-9410; 2840–2473 cal BCE).

The human bones and grave goods, currently curated by the Metz museum, were published by A. Bellard and H. Ulrich in 1961. The skeleton, that of a 35–40 year-old individual, was orientated east–west, like the fissure, and was deposited close to the access channel, next to the remains of a child. The individual was buried in a crouched position on their right side. Most of the 16 ceramic vessels in the grave (mainly urns and biconic goblets) were shattered and appeared to be aligned in two rows in front of the skeleton. A clay spindle whorl, as well as the remains of dog and sheep were also uncovered. In 1983, new investigations led by Mrs. Klag and her sons led to the discovery of more fragments from the ceramic vessels (Thévenin 1983). The site of Martincourt demonstrates that cave burials and cremations co-existed in the Late Bronze Age II.

Source of sample: Ron Pinhasi, Olivia Cheronet, Kevin Kazek (Musée de la Cour D'Or, Metz) and Julien Trapp (Musée de la Cour D'Or, Metz)

Authors of entry: Julien Trapp (Musée de la Cour D'Or, Metz) and Olivia Cheronet

References:

Bellard, A. and Ulrich H. 1961. La sépulture à inhumation des champs d'Urnes de Martincourt (Meurthe-et-Moselle). *Revue archéologique de l'Est* XII: 249–51.

De Laet, S.-J., Nenquin, J.A.E. and Spitaels, P. 1958. *Contribution à l'étude de la civilisation des Champs d'Urnes en Flandre. Dissertationes Archaeologicae Gandenses IV*. Bruges: De Tempel.

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Moussey PLA 2018, Aube (10), France

The site of Moussey PLA 2018 is part of the “Parc Logistique de l'Aube” which is a heritage management project led by the department of Aube. Excavation has been carried out as part of this project since 2004, which led to the investigations at Moussey in 2018. The 7ha site yielded several pits, which contained the remains of five individuals: four adults (Individuals 1–4) and one child aged 4 years±12months (Individual 5). aDNA was successfully analysed from three petrous bones: from Individual 2 (3886), yielding sample I18426 (indeterminate sex), dating to 4650±35 BP (Poz-118848; 3516–3365 cal BCE); from Individual 3 (3887), which yielded sample I18427 (male); and from Individual 4 (3888), which yielded sample I18428 (male). A direct radiocarbon date obtained from Individual 1 (which failed analysis), yielded a further Late Neolithic date of 4615±30 BP (Poz-118849; 3513–3343 cal BCE).

Source of sample: Ron Pinhasi, Olivia Cheronet and Sébastien Chauvin (Inrap)

Authors of entry: Claire-Elise Fischer, Olivia Cheronet, Cécile Paresys (Inrap) and Sébastien Chauvin (Inrap)

Port Bara, Saint-Pierre Quiberon, Morbihan, France

In 1979, the skeletal remains of an adult (Skeleton 2428; c. 35 years old) were found under flat stones on the beach at Port Bara (Andre 1979; Andre and Rollando 1981). A lack of grave goods has not allowed for contextualization of the grave, but the area of Quiberon has produced evidence for Iron Age activity, as represented by the inhumations from Kerne, and a settlement, while in 1884, a series of Gallic burials were found on a small offshore islet a few metres to the west (Gaillard 1884). A petrous bone from this individual yielded sample I15027 (male), dating to 755±20 BP (PSUAMS-9403; 1228–1285 cal CE).

Source of sample: Ron Pinhasi, Olivia Cheronet and Christophe Le Pennec, Musée de Vannes
Author of entry: Claire-Elise Fischer and Olivia Cheronet

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Port Blanc, Quiberon, Morbihan, France

The site of Port Blanc is a megalithic complex in Brittany, in the north-west of France. The site was excavated in 1883 by F. Gaillard and yielded three architectural spaces: two corridor graves (dolmen A and B) composed of megalithic blocks, and an annex composed of rocks

(Gaillard 1883). The two dolmens are 5m apart and parallel to one another. In the chamber of dolmen A, two layers of human remains were discovered, separated by flat stones. The upper layer yielded two individuals with a few grave goods, as well as five skulls that may correspond to grave reorganisation. The lower layer included eleven skulls, one with evidence of trepanation, together with some long bones. In dolmen B, five skeletons were discovered in the corridor and another five skulls in the chamber. The annex also yielded human remains, predominantly skulls.

Radiocarbon dates have been obtained on three bones (Schulting 2005): trepanned skull (Broca 265) yielded a date of 5050±40 BP (OxA-10936; 3930–3660 cal BCE); bone R82.31.1 yielded a date of 5070±50 BP (OxA-10615; 3950–3710 cal BCE); and bone R82.31.25 yielded a date of 4200±45 BP (OxA-1069; 2870–2590 cal BCE).

Eight petrous bones were successfully analysed for aDNA: Skeleton RL 90.30.1.1 (P2429) yielded sample I15028 (female), dating to 3825±25 BP (PSUAMS-9404; 2437–2147 cal BCE); Skeleton RL 90.30.1.2 (P2430) yielded sample I15029 (male); Skeleton RL 90.30.1.3 (P2431) yielded sample I15030 (male); Skeleton RL 90.30.1.4 (P2432) yielded sample I15031 (female); Skeleton RL 90.30.1.5 (P2433) yielded sample I15032 (male); Skeleton RL 90.30.1.6 (P2434) yielded sample I15033 (male), dating to 3495±25 BP (PSUAMS-8997; 1891–1743 cal BCE); Skeleton RL 90.30.1.2 (child) (P2435) yielded sample I15034 (female); and Skeleton RL 90.34.1.2 (P2436) yielded sample I15035 (female).

I15028 and I15034 are second or third degree relatives.

Source of samples: Ron Pinhasi, Olivia Cheronet and Christophe Le Pennec, Musée de Vannes
Authors of entry: Claire-Elise Fischer and Olivia Cheronet

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Roquepertuse, Velaux, Bouches-du-Rhône, France

The site of Roquepertuse comprises a ritual complex built into a natural amphitheatre overlooking the Arc valley, west of Aix-en-Provence. It appears to have functioned as a sanctuary, comprising a dense group of associated buildings set within an enclosing rampart, in which a series of warrior statues and other carved stones were displayed (Boissinot 2004; Armit 2012). It dates broadly from the fifth to third centuries BCE. The human remains derive from two principal sources: a group of skulls displayed on the site as head trophies, and neonatal burials deposited beneath buildings associated with the sanctuary (for details of the human remains see Courtaud et al. 2016, especially Annexe 1).

A human petrous bone and three human teeth from recent excavations by Philippe Boissinot were successfully analysed for aDNA. The petrous, from one of the displayed human heads, yielded sample I19916 (male), from Ensemble 9 (*Rqp. 98-zone 2*), dating to *periode 14*, found at the base of the stair to the monumental *terrasse 1*. The teeth yielded sample I13620 (male) from Ensemble 10 (US108); sample I13621 (male) from Ensemble 13 (*Rqp 95 secteur H13-US106, Rqp Z1 rem*); and sample I13623 (juvenile male) from Ensemble 20 (*Rqp. 95 secteur 22, US 106 Rqp 94 rem*).

Two human petrous bones from perinatal burials, found during the recent excavations, were also successfully analysed for aDNA. These yielded sample I19917 (female) from Skeleton Sep Imm 646, found in a pit dug against the base of wall 435 in *periode 12*; and sample I19918 (female) from Skeleton Sep Imm 720, found near the foundations of wall 1199, House 5 in *periode 10b-12*.

A further human tooth, from Ensemble 16, is not included in the analysis due to mitochondrial contamination: sample I13720 (male).

Another tooth, from Ensemble 19 (*RQP 97, Z1-rem*) failed analysis due to contamination, as did two teeth from skull fragments recovered in excavations by Henri de Gérin-Ricard between 1919 and 1927 from Ensemble 3 and Ensemble 5.

Source of samples: Philippe Boissinot

Author of entry: Ian Armit

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Villard, Lauzet-Ubaye, France

The tomb excavated by Gérard Sauzade is located at an altitude of 1267m (Sauzade and Schmitt 2020). It comprised a rectangular funerary chamber of 6 slabs and a cover slab, an entrance corridor and a tumulus around 12m in diameter. The funerary chamber yielded 2197 human bones in a single layer. At least 25 individuals (16 adults and 9 juveniles) were buried in the grave. Partially articulated bodies represent only 5% of the remains, with most of the bones being disarticulated. Grave goods were scarce in comparison with the number of individuals: two incomplete Bell Beakers vessels, a copper dagger, a wrist-guard, together with a few lithic tools and ornaments. Three radiocarbon dates are in accordance with the grave goods: 3895±35 BP (Ly-9995; 2470–2214 cal BCE), 3725±25 BP (PSUAMS-1835; 2201–2035 cal BCE) and 3655±25 BP (PSUAMS-1834; 2136–1946 cal BCE). However, a fourth radiocarbon date of 3515±40 BP (Ly-9994; 1948–1700 cal BCE) indicates that the tomb was (at the very least) reused during the Middle Bronze Age.

Petrous bones from six disarticulated crania from the funerary layer were sampled and successfully analysed for aDNA. These yielded sample I10342 (male) from a child (VL63); and samples I10343 (female; VL498), I10344 (female; VL940), I10345 (female; VL1009), I10347 (male; VLR2) and I10348 (male; VLR3) from adults or adolescents.

Source of samples: Aurore Schmitt and Ron Pinhasi

Author of entry: Aurore Schmitt

Reference: Sauzade, G. and Schmitt, A. 2020. *Le dolmen du Villard, Lauzet-Ubaye (04) et le contexte funéraire au Néolithique dans les Alpes méridionales: Réflexions sur le mobilier et les pratiques funéraires au Campaniforme en Provence*. Aix-en-Provence: Presses Universitaires de Provence.

HUNGARY

Dunaalmás-Kavicsbánya, Komárom-Esztergom County, Hungary

Between November 2017 and July 2018, the Kuny Domokos Museum carried out a rescue excavation at the Dunaalmás-Kavicsbánya site under the direction of Dr Sándor Petényi. Dunaalmás is located in the northern part of Transdanubia, on the banks of the Danube, on the current Hungarian-Slovak border. The site is located in the field between Highway 1 (leading from Dunaalmás to Almásfüzitő) and the river. During enlargement of the local gravel mine, an area of 1ha was surveyed, yielding 343 archaeological features from the Middle Neolithic (5500/5400–5000/4900 BCE) and Hallstatt D1 (620–530 BCE) periods. Currently, 63 features can fairly certainly be associated with Early Iron Age activity.

A petrous bone from Early Iron Age grave 18 was successfully analysed for aDNA. The grave showed evidence for disturbance, as did another four in close proximity to it, in the south-east corner of the excavated area. The unusual upward facing position of the shoulders of the skeleton indicate that it was still intact when it was disturbed, suggesting that looting took place in antiquity, perhaps not long after interment of the body.

Sample I18227 (male) derived from skeleton 335 (grave 18), whose surviving grave goods included a worked bone tool, spindle whorl and loom weight, together with two ceramic beads. The assemblage also included high-quality black-fired ceramic vessels, some with geometric graphite decoration.

Source of samples: Kuny Domokos Museum, Tata

Author of entry: Csilla Deminger

Dunaszentgyörgy, Proletár trail, Tolna county, Hungary

The Dunaszentgyörgy, Proletár trail site is located on the low, flood-free loess area of the former Danube river bed in central Hungary. The favorable circumstances of its physical geography and transport options are reflected by the fact that this area has been inhabited in almost all time periods, with a formal road from as early as the Roman era (running directly under modern road No. 6, section 119). During the rescue excavations performed between 20th March and 15th May 2011, during construction of a gas pipeline, remnants of settlements and graves dating to the Middle and Late Neolithic, Late Copper Age, Bronze Age, Early Iron Age, Celtic, Roman and Avar periods were found.

Grave no. 109, orientated roughly north-west/south-east, was located in a small Neolithic cemetery in the southern part of the excavation. It had been partially cut by an earlier cable trench, but the skeleton was undisturbed. Instead of the crouched position typical of the Lengyel culture (c. 5000/4900–4000 BCE), the body lay in an extended supine position with the head to the south-east. The bones were quite badly preserved in the sandy soil but the radius of the left forearm was missing, despite the complete absence of any indication of disturbance. Around the right hand and the pelvis, 33 oyster shell beads, c. 1cm in diameter, were found

(6u119Q109J1); 6 similar beads were found under the skull, and more on the breastbone (6u119Q109J2). Scattered around the cervical vertebrae, the chin and the collarbone were the elements of a necklace comprising perforated deer teeth (6u119Q109J3) and tiny oyster shell beads (6u119Q109J4). More beads, strung in four rows (6u119Q109J5) were found under the right hand on the pelvis. A large piece of polished, perforated spondylus shell in the grave may also have been used as a pendant or a bracelet (6u119Q109J6).

A petrous bone from the individual in this grave yielded sample I18691 (female).

Source of sample: Wosinsky Mór Museum, Szekszárd

Author of entry: Géza Szabó

Reference: Szabó, G. 2011. Dunaszentgyörgy, Proletár-dűlő (6-os út 119 kmsz). *Régészeti Kutatások Magyarországon* 2011: 45.

Füzesabony–Kettős-halom, Heves county

The multi-period archaeological site of Füzesabony–Kettős-halom lies in the northern part of the Great Hungarian Plain, in the southwestern part of the town of Füzesabony. Prehistoric finds had been recognized and collected on the site in the 1920s, with archaeological inspection and a small trial excavation carried out in 1959 and 1960. Realising the destruction caused by modern sand mining activity, János Győző Szabó performed systematic excavations between 1960 and 1971 (with interruptions), and he returned to the threatened site once more in 1983 (Patek 1991).

Despite Szabó's self-sacrificing work, the sand-mining activity destroyed several graves, which belonged to different archaeological periods. Although it was the discovery of inhumation burials dating to the ninth–eighth centuries BCE that provoked the excavations, graves of the Middle Bronze Age Füzesabony culture, of Imperial period Sarmatians and a few inhumation burials from the Hungarian conquest period were also found during the campaigns. Stray finds from the Alföld Linear Pottery culture suggest that the sand hill was occupied since the Neolithic. A total of thirty-six Early Iron Age graves were excavated, only some of which can tentatively be linked to the so-called Mezőcsát group of the pre-Scythian period. Yet, this represents one of the largest known cemeteries on the Great Hungarian Plain associated with the unique Mezőcsát phenomenon of inhumation burials accompanied by distinct sets of grave goods. The inhumation burial rite of the Mezőcsát group significantly differs from the Late Bronze Age traditions associated with the practice of cremation. The deceased of the Mezőcsát group were laid flexed or contracted within the grave, mainly in a west-east orientation and, in all cases, with at least one vessel. The practice of placing food offerings (which was predominantly the meat of small ruminants, sheep or goat) and grinding stones in the grave is very common. Decorated bone plates represent characteristic finds of the Mezőcsát group and are fairly common grave goods in the Early Iron Age cemeteries of Heves county. In addition to the bronze objects (rings and plates) associated with adornments, small iron objects (pins and awls) are also common in these graves. Vessels reflect pottery traditions of the local Late Bronze Age communities, especially the Kyjatice and Gáva cultures (Patek 1991).

Petrous bones from five individuals were successfully analysed for aDNA. Sample I18211 (female) derived from an individual in grave 6, who was accompanied with a large, decorated handmade vessel, a bone plate, a grinding stone and sheep bones. Sample I18213 (female) derived from a mature individual in grave 10, who was adorned with a small bronze ring and two bronze buttons and was accompanied with a decorated handmade vessel and a bronze plate.

Sample I18216 (female) derived from a mature individual in grave 22, who was adorned with small funnel-shaped bronze plates and was accompanied with a large vessel, lying south-east of skull, a ceramic cup, and a bowl at the eastern side of the large vessel. The grave also contained a bone plate near the upper left arm, a short fragment of an iron rod (an awl or pin?), a bone 'button' and food offerings (sheep and rabbit bones). Sample I18245 (female) derived from an individual in grave 58, who was accompanied with a bowl, placed in front of the skull, and a large vessel next to the left arm. Sample I18241 (female) derived from an individual in grave 63, who was adorned with three bronze rings, near the skull, seven funnel-shaped bronze plates, two bronze buttons and iron bracelets at right forearm. The grave also contained a large vessel near the left upper arm, a bone plate lying north of the skull, a grinding stone placed north of feet, and sheep or goat bones on the left side of the skeleton (Patek 1991; Éry 1991).

Source of sample: László Domboróczki, Dobó István Castle Museum, Eger

Author of entry: Szabolcs Czifra, Hungarian National Museum, Budapest

References:

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Gór, Kápolnadomb, Vas County, Hungary

Excavations in 1988–93, in advance of construction of a reservoir at Gór, Kápolnadomb, on the bank of the Répce River, were undertaken by the Savaria Museum (Vas County) and led by Gábor Ilon and József Dénes. Around 7300m² of the c. 4ha hill was explored, revealing 'settlements' and burial features dating to the Neolithic, Bronze Age, Iron Age and Medieval period. The discovery of 21 stone moulds used for bronze casting (Ilon 1992; 1996; 2007) suggests that, in the Late Bronze Age Urnfield period, the site was an important ritual centre. In addition to a metalworking workshop (Ilon 2003), sections of houses were revealed, and human remains were found in several pits (Ilon 2001; Zoffmann 2007).

During the Early Iron Age, occupation of the site can be traced only through artefacts (Ilon 2008). In the Late Iron Age, a 4.5ha *oppidum*, including pottery (Ilon 1998; 2012) and textile workshops (Marton 2001), was enclosed by a timber-laced earth dump rampart enclosure. Radiocarbon dating places the settlement in the LTB2–C1 periods (third–second centuries BCE; Ilon 1998). A small hillfort (timber castle) was erected in the Árpadian Age (Dénes 1990) and Late Medieval settlement traces were also found.

Six samples were successfully analysed for aDNA.

Sample I4996 (male), dating to 2240±20 BP (PSUAMS-8422; 385–206 cal BCE), derived from the petrous bone of an individual (GEN_145) aged 17–18 years lying prone in quadrant I-7 pit c/2 (1993) (Ilon 2001, Figure 4). The pit contained mixed Neolithic, Late Bronze Age and Celtic pottery, the latter located at the level of the skeleton (Ilon 2001, Taf. VI-VII). Sample I4998 (male), dating to 2255±20 BP (PSUAMS-8423; 391–208 cal BCE), also derives from

the petrous bone of an individual (GEN_147) aged 17–18 years lying prone in quadrant I-7 pit c/2 (1993).

Sample I25504 (male) derived from the petrous bone of an individual (IAP046) aged 3–5 years recovered from quadrant L-8 pit a (1992), together with c. 5kg of ceramic fragments and animal bones, suggesting that the skeleton was covered with waste material (Ilon 2001, 248, Taf. VIII). Sample I25505 (female) derives from the tooth of an individual (IAP047) recovered from quadrant H-7 pit a/1 (1993; Zoffmann 2007). Animal bones, stones and clay fragments were also recovered from the pit, along with a bronze vase-headed pin and c. 15kg of ceramic fragments (Ilon 2001, 245–6, Taf. I-II), which date the context to the younger Urnfield Culture (Hallstatt B2; 1000–800 BCE). Sample I25507 (male) derives from the petrous of an individual (IAP049) aged 40–59 years (Zoffmann 2007) deposited in quadrant F-4-5, pit c (1991), which also contained loomweights, needles and ceramic cups (Marton 2001, 301, Taf. IV–VI.) dating to HaC2–D1 (650–550 BCE). Sample I25508 (male), from a petrous bone, derives from the cranial fragments (Zoffmann 2007) of an individual (IAP050) found in the upper layers of the Late Iron Age (Celtic) rampart (quadrant E-2-3 (1991)), dating to around 320–200 BCE. Cranial and post-cranial remains of another (unsampled) mature male individual were also found nearby.

Source of samples: Hungarian Natural History Museum, Department of Anthropology, Budapest

Author of entry: Gábor Ilon, Anna Szécsényi-Nagy and Viktória Kiss

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Győr-Kert utca, Győr-Moson-Sopron County, Hungary

Prior to an apartment house construction project, the Rómer Flóris Museum of Art and History in Győr performed trial and preventive excavations on the site known as Győr-Kálvária Street (Molnár and Ujvári 2020). The Iron Age cemetery recorded during trial trenching of one of the last surviving dunes on the eastern bank of the River Rába, is part of the same site encountered some 100m away during railway construction in the last third of the nineteenth century. The site was heavily disturbed in the twentieth century by the construction and demolition of industrial facilities. The recent excavations resulted in 22 graves—both cremation and inhumation burials, unfortunately mainly robbed—from the Late Iron Age (La Tène culture) covering almost the entire excavated surface; two Roman period graves were also recovered in the south-west of the excavated area. Beside the cemetery, Roman, Árpád and modern period settlement features (e.g. ditches, pits and a hearth) were also unearthed. Chipped stone tools from the subsoil and from the fill of grave 59 also attest to an earlier phase of prehistoric occupation on the site or in its immediate surroundings.

The cemetery, which stretches in a north-east/south-west direction across the dune, contains graves dating to the La Tène B period (as recovered by the recent excavations in the north-west of the site), and graves dating to La Tène C, based on certain types of glass bracelets and beads, sapropelite (oil shale) armlets, and tripartite Hohlbackelrings (as recovered by nineteenth century works in the south-west of the site). The entire site was probably therefore in use from the (end of the) fourth century to the beginning of the second century BCE (c. 320–180 BCE).

Graves S-22 and S-59 both had a surrounding ditch and were larger than the others. Grave S-30 also had larger dimensions and was among the few unrobbed graves in the cemetery. Among the excavated burials only two—S-55 and S-103—were cremated; the former yielded several fibulae and a spear, the latter a bent sword and a spear.

Eight petrous bones and two teeth were successfully analysed for aDNA. The petrous bones yielded: sample I18526 (male), from the well-preserved, articulated skeleton (inv. 41) of an individual aged 50+ years, buried in grave S-32 with an iron sword and spear, an iron fibula, and several ceramic vessels; sample I18527 (male), from a child (inv. 205) aged 3–4 years in

disturbed grave S-6, who was accompanied by an iron fibula and two ceramic vessels; sample I18528 (female), from the heavily disturbed skeleton (inv. 25) of an individual aged 25–40 years in grave S-21 which appeared to be accompanied by the disarticulated bones of at least one other individual, together with two bronze fibulae, an iron fibula, a yellow-brown bead and several ceramic vessels; sample I18529 (male), from the well-preserved skeleton (inv. 105) of an individual aged 20–25 years in grave S-34 wearing an iron bracelet; sample I18530 (male), dating to 2230±20 BP (PSUAMS-9423; 381–203 cal BCE), from the disturbed coffin burial (inv. 130) of an individual aged 35–55 years in grave S-22, accompanied by a large assemblage of grave goods including an iron spear, a Linsenflasche vessel, an iron knife, a bronze pin, sheep shearers and several ceramic vessels; sample I18531 (male), from the skeleton (inv. 205) of an individual aged 25–35 years in grave S-48, disturbed by a modern utility pipe but accompanied by an iron spear, a bronze bead and several ceramic vessels; sample I18839 (female), from the heavily disturbed skeleton (inv. 121) of an individual aged 35–40 years in grave S-50, with grave goods including bronze fittings/fastenings, bronze and iron fibulae, a bronze spiral ring, a silver ring and buckle, and several ceramic vessels; and sample I18840 (female), from the well-preserved, articulated skeleton (inv. 100) of an individual aged 25–45 years in grave S-30, who was accompanied by a large grave good assemblage including 6 ceramic vessels, 3 bronze fibulae, two bronze bracelets, and several fragmentary iron objects.

The individuals represented by samples I18527 and I18839 are second or third degree relatives.

The teeth yielded sample I18110 (female), from the disturbed skeleton of an individual aged 40–50 years in grave S-59, who was accompanied by iron fibulae, a bronze fibula, two bronze armlets and three ceramic bowls; and sample I18988 (female), from the heavily disturbed skeleton (inv. 102) of an individual aged 25–40 years in grave S-41, containing two bronze fibulae, a blue biconical bead, fragments of a bronze chain and five ceramic vessels.

The individuals represented by I18988 and I18530 are second or third degree relatives. Sample I18988 has been omitted from the analysis due to low coverage.

Sample I18147, from a tooth, was found to be a genetic duplicate of sample I18110 and the data have been merged under the latter sample code for analysis.

Source of samples: Rómer Flóris Museum of Art and History, Győr

Author of entry: Ferenc Ujvári

Reference: Molnár, A. and Ujvári, F. 2020. Adatok Győr vaskorához. Kora vaskori leletek a Káptalandombról és kelta lelőhelyek a város területéről/Contributions to Iron Age Győr. Early Iron Age finds from the Káptalandomb and Celtic sites from the urban area. In: D. Czigány and Zs. N. Matus (eds), *Tomka 80. Ünnepi tanulmányok a 80 éves Tomka Péter tiszteletére*, 401–18. Győr: Rómer Flóris Művészeti és Történeti Múzeum.

Jászberény-Cserőhalom, Jász-Nagykun-Szolnok County, Hungary

Jászberény-Cserőhalom in Eastern Hungary is a Late Iron Age biritual cemetery comprising a total of 50 graves (Kaposvári 1969) and is arguably one of the most important and best cited Celtic cemeteries in the region. The cemetery is located in the vicinity of Jászberény, not far from the course of the Zagyva River, in the heart of the Great Hungarian Plain, and lies on one of the natural sand hills of the middle Tisza region. The hill, with a relatively low altitude of 112m, saw use for burial in the Neolithic and Bronze Age, as well as in the Iron Age. Unfortunately, the site has been disturbed and partly damaged by sand quarrying in the nineteenth century.

Due to the intensification of sand quarrying, the Damjanich János Museum conducted a rescue excavation on the site in 1957–9 and recovered the remaining parts of the cemetery, after which the whole site was destroyed. The graves date to La Tène B2–C2 (320–150 BCE). Objects displaying typical Eastern Celtic characteristics include the Linsenflasche vessel from grave 52, iron weaponry from grave 49 and the masked bead from grave 53. Grave 17 contained two emblematic objects—a unique dragon head-shaped rhyton (drinking horn) and an engraved iron knife—together with a pair of brooches and stamped pottery (Kovács 2017, 47–56).

A few characteristics of the Early Iron Age Vekerzug culture can also be observed, such as the barrel-shaped boss and finger-tip impressed pot from grave 121. The contracted position of some inhumations can also be interpreted as reminiscent of the Early Iron Age Scythian/Vekerzug cultural tradition in a Celtic context, such as in the case of grave 13. Although local communities are almost invisible in the Late Iron Age, traces of Scythian culture during the fourth–third centuries BCE can still be recognized in some cases.

Petrous bones from three individuals were successfully analysed for aDNA. Sample I18181 (male) derives from an extended inhumation in grave 107, which was accompanied by two large ceramic vessels and an iron fibula. Sample I18182 (female) derives from grave 2, which appears to have been reopened soon after burial and the body rearranged. This individual was buried with a wheelmade mug, handmade bowl, a sandstone whetstone, an iron knife and an iron brooch. Finally, sample I18183 (female) derives from the individual in grave 108, which was accompanied with a bronze fibula, a bronze brooch, an iron brooch and an iron bracelet.

Source of samples: Hungarian Natural History Museum

Author of entry: Péter F. Kovács and Tamás Hajdu

References:

Kaposvári, Gy. 1969. A Jászberény–cserőhalmi kelta temető [Das Keltische Gräberfeld von Jászberény–Cserőhalom]. *Archaeologiai Értesítő* 1969: 178–98.

Kovács, P.F. 2017. Szkíták és kelták öröksége. *A vaskor régészete Jász-Nagykún-Szolnok megyében. Szolnoki Régészeti Tanulmányok I. [Legacy of Scythians and Celts. Archaeology of the Iron Age in Jász-Nagykún-Szolnok County. Archaeological Papers of Szolnok I]*. Szolnok: Damjanich János Múzeum.

Kópháza-Széles földek, Győr-Moson-Sopron County, Hungary

The Rómer Flóris Museum of Art and History in Győr performed preventive excavations on the site of Kópháza-Széles földek in north-west Hungary during the course of 2018 in connection with the construction of an earthwork for a section of the M85 motorway (Ujvári 2019). Investigations revealed an extraordinarily intensive multi-period site, including cemeteries, settlements and isolated graves. Trial excavations were performed in the autumn of 2017. The removal of the topsoil was carried out alongside metal detection, and a great number of metal artefacts were collected as a result. This method proved to be essential, because a large number of the cremation graves were located or set high, in the topsoil, and hardly penetrated into the subsoil; without metal detectors, many graves would have been destroyed or highly damaged during topsoil removal.

This extensive site contained both settlements and cemeteries from several periods. The cemeteries (Middle Bronze Age, Early Iron Age, Late Iron Age, Roman period) were located

in the southern portion of the site, while the settlement area was to the north of the cemetery, and overlapped its northern part. Interestingly, stone-packing was commonly represented in the burials of most periods: especially in the Middle Bronze Age, and in the Early and Late Iron Age. The constant battle with groundwater hindered the excavation of deep graves and other features to a great extent, which was particularly true of the Middle Bronze Age and Late Iron Age inhumation graves. Traces of Copper Age, Early Bronze Age, Early Iron Age, Roman period and Árpád period settlements were also discovered.

The Late Iron Age cemetery was represented by 20 graves, which were scattered over a large area and concentrated into a southern and a northern grave group. Their common characteristic was that they were extensively looted. Some graves were completely robbed, with neither bones nor grave goods having survived. For these, it was merely their location and the stacked stone structure that made it possible to conclude that they were from the Late Iron Age, since it was, for the most part, the sides of the grave that were paved with stone in this period. When bones were found, they were in extremely poor condition. There were two types of rites at the cemetery, as both cremation and inhumation graves have been found, although the inhumation graves dominated. The majority of the burials were oriented to the south-east/north-west, including several graves (both cremation and inhumation) surrounded by rectangular ditches.

In the Late Iron Age cemetery, cremation burial S-235, enclosed by ditch S-236, should be highlighted. This small cremation burial was completely looted, with only ceramic fragments of varying sizes being recovered during excavation. The grave and the surrounding ditch were paved with stacked stones, and pairs of postholes observed in the upper section of the long sides of the grave pit, as well as in the corners of the area enclosed by the surrounding ditch, suggested an elaborate funerary structure. Based on the grave good assemblages, the cemetery can be dated to the second half of the early phase of the La Tène culture, and it probably continued in use during the Middle La Tène period too (LTB-C1; (end of the) fourth–third century BCE; 320–200 BCE).

Six petrous bones were successively analysed for aDNA. Sample I18833 (female) derived from an individual aged 20+ years in grave S-1455 (inv. 1325) which, together with grave S-1383 (which contained an individual aged 20–39 years), was surrounded by a ditch (S-1479). The skeleton in this grave appears to have been damaged during looting, but was accompanied by two bronze bracelets, an iron fibula, and the remains of several ceramic vessels. Sample I18835 (male) derived from a child aged 8–9 years in grave S-1386 (inv. 1327) which, together with grave S-1453, were surrounded by a ditch (S-20/27). Though the grave had not been looted, the skeleton and grave goods (which included two iron fibulae and four ceramic vessels) were in poor condition. Sample I18837 (male) derived from an individual aged 30–50 years in grave S-1370 (inv. 1401), which appears to have been looted, but which included two ceramic vessels and an iron fibula. Sample I18838 (male) derived from an individual aged 40–59 years in grave S-1453 (inv. 1470) which was also surrounded by ditch S-20/27 and included sheep shearers, an iron knife, a possible whetstone, an iron spear, several iron implements and a number of ceramic vessels.

This individual has a father-son relationship with the individual represented by sample I18835, and indeed, the two graves were separated by only a 40–50 cm wide, 15–20 cm high spit of earth. Given the lavish grave assemblage of grave S-1453, and the attribution of ‘young woman’ status to the individual in grave S-1386 (suggesting a gracile or underdeveloped skeleton), it would be tempting to interpret sample I18838 as representing the father, and

sample I18835 as the son. The data have been merged under I18838 for the purposes of analysis.

The final two samples derive from a heavily disturbed double grave (S-1352), with postholes suggesting an elaborate funerary structure: the northernmost individual (3871; inv. 1395), aged 20–59 years, yielded sample I18834 (female), whilst the southernmost individual (3869; inv. 1396), aged 35–55 years, yielded sample I18832 (male). Grave goods included an iron spear, which lay next to the skull of the southern individual, iron shears, an iron knife and fragments of another possible iron knife or sword, together with a large number of ceramic vessels.

Source of samples: Rómer Flóris Museum of Art and History, Győr

Author of entry: Ferenc Ujvári

Reference: Ujvári, F. 2019. Kópháza-Széles földek, or from prehistory to the second world war. *Hungarian Archaeology* 8(3): 20–7.

Markotabödöge-Mohos-tóra-dűlő, Győr-Moson-Sopron County, Hungary

The site of Markotabödöge-Mohos-tóra-dűlő is located on the western outskirts of Markotabödöge (topographical number: 045/5-6), Győr-Moson-Sopron County, in north-west Hungary. A field survey and large-scale rescue excavation were performed between 11 December 2013 and 10 November 2014, in advance of sand mining. The total excavated area was 174.864 m², from which a total of 2896 objects were recovered. A Celtic cemetery, containing 127 graves, was unearthed on the north-eastern/eastern edge of the excavation area and dated to the La Tène B2–C1 period (i.e. the end of the fourth–third centuries BCE; 320–260 BCE). On the northern and southern edge of the site, two isolated burials were also found: grave 875, with the skeleton of a child from the Avar period; and grave 1728, with the skeleton of an adult. An extensive Árpád period settlement was also found with features including a pit, a well, a ditch, a semi-subterranean house and a hearth.

The Celtic graves were situated at the north-eastern/eastern edge of the site; however, their location suggests that the cemetery extended beyond the north-eastern extent of the mine. The majority of the graves were inhumation burials, but some were represented by empty tombs and cremation burials (e.g. graves 1568, 1861, 1948, 1966, 2151, 2166, 2613); men, women and children were represented in the burial population. The grave pits were mainly oriented south-east/north-west, but west/east and north-west/south-east orientations were also present. Some of the burials were framed by narrow, rectangular ditches. Unfortunately, some of the graves were looted, but typical grave goods of men comprised iron bracelets (e.g. grave 2321), iron shears (e.g. grave 2356) and weapons, i.e. swords (e.g. grave 1168, 2356, 2357), spearheads (e.g. grave 1477, 1548, 2357), iron knives (e.g. grave 1548) and shields (e.g. grave 1532, 2321., 2353, 2357). The typical grave goods of women included bronze fibulae (e.g. grave 1187, 1464, 1572), iron fibulae (e.g. grave 1184, 1464, 1516, 2334), beads (e.g. grave 1512), iron bracelets (e.g. grave 1483, 1529, 1572), sapropelite bracelets (e.g. grave 1187, 1549, 2334), bronze bracelets (e.g. grave 1184, 1483, 1572), bronze hollow-knobbed bracelets (e.g. grave 1533, 2334), iron belt-chains (e.g. grave 1553, 1572, 2334), bronze anklets (e.g. grave 1464, 1483, 1529, 1533, 1549, 1572) and spindle-whorls (e.g. grave 1553). Pots accompanied children, but in two cases they were found with bronze brooches (grave 1519, 2343).

Petrous bones from six individuals were successfully analysed for aDNA. Sample I18488 (female) derived from an individual aged 16–18 years in grave 2334, who was adorned with a bronze necklace, two iron brooches, an iron belt-chain, a bronze hollow-knobbed bracelet, a

sapropelite bracelet and two bronze anklets, and was accompanied with a jug and a bowl containing animal bones.

Sample I18489 (male) derived from an individual (represented by only a cranium) in grave 1548, which was surrounded by a rectangular ditch (1541). Other human bones were found beneath cranium S10007, and at the base of the grave pit were the badly preserved remains of a supine individual who appeared to have been interred in a coffin. The grave had been looted, but the remaining grave goods interred with this latter individual included an iron spearhead, an iron knife, an iron brooch, a sapropelite bracelet, three fragmented ceramic vessels and animal bones.

Sample I18490 (male) derived from an individual aged 30–40 years in grave 2357, who was accompanied with an iron sword (in its sheath), an iron spearhead, a shield, a bronze armlet, and several vessels which appear to have been associated with animal bones.

Sample I18491 (female) derived from the individual in grave 1529, buried with fragments of a bronze object, an iron bracelet, two anklets and a ceramic vessel.

Sample I18492 (male) derived from the individual in grave 1187, who was adorned with a bronze fibula, an iron fibula, a sapropelite bracelet, two fragments of a glass bracelet, and was accompanied by three ceramic vessels and animal bones.

Sample I18493 (female) derived from individual S10012 in grave 1572, who was interred with a bronze fibula, an iron rivet, two bronze bracelets, a fragment of glass bracelet, a fragment of iron bracelet, an iron belt-chain and a bronze anklet.

The individuals yielding samples I18490 and I18492 are brothers. Samples I18489 and I18490 have a second degree relationship, as do samples I18489 and I18492.

Source of samples: Rómer Flóris Museum of Art and History, Győr
Author of entry: Krisztina Pesti

Mezőkeresztes–Cet-halom (M3 motorway, site 10), Borsod-Abaúj-Zemplén County, Hungary

The site of Mezőkeresztes–Cet-halom occupies an elevated position on the bank of Lator stream, on the southern outskirts of Mezőkeresztes. A field survey, led by Mária Wolf, was undertaken in 1992, followed by large-scale rescue excavations in 1993–4, in advance of construction of the M3 motorway. In total, an area of 6,000m² was excavated, yielding 264 settlement features and 26 graves of various date (Middle Neolithic, Late Copper Age, Late Bronze Age, Early Iron Age/pre-Scythian, Celtic, Roman, Sarmatian and Early Árpáadian period).

Grave 22 was situated at the highest point of the site and it was the sole inhumation burial from the Early Iron Age (pre-Scythian period). The deceased was orientated north-south and lay in an extended supine position, with the left hand beside the body and the right hand on the pelvis. The only grave good was a bowl, placed upside down over the head. The bottom of the bowl was missing, so the skull could be seen through the hole (Wolf and Simonyi 1995). Although the extended body position and the accompanied bowl can be associated with high probability with the pre-Scythian Mezőcsát group, they have parallels in the Scythian-period

Vekerzug culture as well. A petrous bone and two teeth were taken from this individual and their combined data yielded sample I11683 (female).

Source of the sample: Herman Ottó Museum, Miskolc

Author of entry: Piroska Csengeri, Herman Ottó Museum

Reference: Wolf, M. and Simonyi, E. 1995. Előzetes jelentés az M-3-as autópálya 10. lelőhelyének feltárásáról. Autobahn M3 10. Fundstelle. *Somogyi Múzeumok Közleményei* 11: 5–32.

Nógrádkövesd–Víztározó, Nógrád County, Hungary

A small rescue excavation at Nógrádkövesd–Víztározó was undertaken by Pál Patay of Palóc Múzeum (Balassagyarmat) after human skeletal remains were discovered on a hill next to the railway station at Nógrádkövesd during the construction of a new water storage basin in 1952. The site had been largely disturbed by the construction work but pits belonging to Neolithic settlements, 18 graves belonging to an Iron Age mixed rite cemetery and four inhumation graves from the Hungarian Conquest Period were recovered. Of the Iron Age graves, one was identified as ‘Celtic’ and the other 17 as ‘Scythian’ (Patay 1955; 1956; 1957).

Sample I25525 (female) derived from the petrous bone of an individual (IAP067) aged 28–32 years (Malán 1956, 25–32) lying on their right side in a crouched position in ‘Scythian’ grave 20 (inv. 8721). The grave also included two Early Iron Age pottery vessels, fragments of other pots and a clay spindlewhorl.

Source of samples: Hungarian Natural History Museum, Department of Anthropology, Budapest

Author of entry: Károly Tankó and Anna Szécsényi-Nagy

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Patay, P. 1956. Újabb kőkori és kelta leletek Nógrádkövesden és a Nógrádi dombvidéken. *Archaeologiai Értesítő* 83: 186–91.

Patay, P. 1957. Adatok a nógrádi dombvidék X-XI. sz.-i településtörténetéhez. [Contributions a l’histoire du peuplement, aux X^e et XI^e siècles, de la région de collines de Nógrád]. *Archaeologiai Értesítő* 84: 58–66.

Novaj-Földvár, Heves County, Hungary

The Novaj-Földvár archaeological site is located in the Egri-Bükkalja micro region, at the foot of the Bükk Mountains, about 3km south-south-east of Novaj village. The hillfort, surrounded by a ditch, covers approximately 0.6 ha at the south-east end of a north-west/south-east flattened ridge. There is also an open settlement next to the hillfort.

Based on the typology of the finds, the site was associated with the Hatvan and Füzesabony cultures, and due to the surface characteristics, it was classified as hillfort. The István Dobó Castle Museum of Eger conducted excavations in the area of the hillfort in 1981–2. Two pre-Scythian burials (belonging to the Mezőcsát culture, c. eighth century BCE) and settlement

features belonging to the Füzesabony culture were excavated, and the Bronze Age settlement features and finds have been processed (Mengyán 2019).

Of the two pre-Scythian graves found during excavation in 1981, one (grave 2) was dug into the ruins of the Bronze Age settlement and contained the skeleton of a child, aged 3–4 years, who lay on their left side in a contracted position and was orientated north-west/south-east. Both legs were pulled towards the chest, as well as the arms. A one-handled mug with slightly flared rimmed was placed in front of the chest, while a necklace of 26 drilled limestone beads was found around the neck of the child and a bone belonging to a boar was found behind the skull, at the shoulder. A petrous bone from this individual yielded sample I18246 (female).

Source of samples: Dobó István Vármúzeum, Eger

Author of entry: Ágnes Somogyvári

Reference: Mengyán, A. 2019. Middle Bronze Age finds from the southern foothills of the Bükk Mountains (North-eastern Hungary): Case Studies of Maklár-Baglyashalom, Novaj-Földvár and Szihalom-Árpád vár, in K. Fischl and Kienlin, T.L., *Beyond Divides – The Otomani-Füzesabony Phenomenon Current Approaches to Settlement and Burial in the North-eastern Carpathian Basin and Adjacent Areas. Universitätsforschungen zur prähistorischen Archäologie Band 345*, 227–94. Bonn: Verlag Dr. Rudolf Habelt GmbH.

Sirok–Akasztómály, Heves county

The site of Sirok–Akasztómály is located in the eastern part of the Mátra Mountains (North Hungary), on the edge of the gently widening section of the valley of the Tarna stream, about 1.5km north-west of the village of Sirok. The site, which is situated on a sand hill barely protruding from the valley floor, was discovered due to modern sand mining activity and, due to the threat of destruction, János Győző Szabó carried out rescue excavations in 1969 and 1970. The two short campaigns revealed Early Iron Age Mezőcsáti-type burials and Late Iron Age settlement remains. The Early Iron Age cemetery occupied a narrow strip on top of the former sand hill and the graves were widely spaced (6-7m apart). All the graves were inhumation burials and, compared to the cemeteries of the same period, appeared to belong to members of a wealthy community (Patek 1991). It is interesting to note that the excavated (adult) individuals were female, whilst the gender of a child and a disturbed burial could not be determined (Éry 1991). Out of the six female graves, five were accompanied with bone plates, of which particularly richly decorated versions are known from Sirok. Typical motifs are incised spirals, divided triangles, and rhombuses. These bone plates are typical of the Early Iron Age Mezőcsát group, but their interpretation is still disputed. Apart from heavily disturbed grave 6, all the burials contained animal bones (sheep), representing food offerings. Based on the ceramic vessels and the gold jewellery in grave 8, the burials can be dated to the ninth to eighth centuries BCE (Patek 1991).

A petrous bone from an individual in grave 3 yielded sample I18239 (female). She was adorned with small bronze rings (the remains of gloves?), and was accompanied with a large decorated handmade vessel, a large handmade bowl, a cup, a decorated bone plate, an iron needle, a grinding stone and sheep bones.

Source of sample: László Domboróczky, Dobó István Castle Museum, Eger

Author of entry: Szabolcs Czifra, Hungarian National Museum, Budapest

References:

Éry, K. 1991. Embertani vizsgálatok Heves megye Kr.e. VIII.századi népességén/Die anthropologische Untersuchung der aus dem 8. Jh.v.Ch. stammende Bevölkerung des Komitates Heves. *Agria* 25–26 (1989–1990): 119–58.

Patek, E. 1991. A Szabó János Győző által feltárt „preszkíta” síranyag. A Füzesabony–Mezőcsát típusú temetkezések újabb emlékei Heves megyében/Die von János Győző Szabó freigelegten „preskythischen” Grabfunde. Die neuen Denkmäler der Bestattungen des Typs Füzesabony-Mezőcsát im Komitat Heves). *Agria* 25–26 (1989–1990): 61–118.

Szeged-Kiskundorozsma-Sandpit 4, Csongrád-Csanád County, Hungary

In 2009, two rescue excavations were carried out at the site of Szeged-Kiskundorozsma-Sandpit 4. The site lies directly next to the city of Szeged, in southern Hungary, in the vicinity of Kiskundorozsma, not far from the Tisza/Maros River confluence. The site is situated on two low hills (northern and southern), which emerge from a wetland environment. At one time they were surrounded by a branch of the Maty stream. Both hills were excavated, and almost the entire site was investigated (Pilling and Ujvári 2012).

The Iron Age phase of the site consists of a La Tène settlement (occupying both the northern and southern hills) and the cemetery of the Srem/Syrmian-group (lying only on the northern hill). The settlement comprised ditches, houses, pits, ritual features, ovens, a large clay extraction pit and numerous postholes. A total of 15 houses were excavated, the vast majority found on the northern hill. The La Tène settlement dates to between LTC1b and LTC2/early LTD (i.e. the last third of the third century and the end of the second/beginning of the first century BCE).

The cemetery is badly plundered, so the material is very fragmentary and incomplete. Thirty-four features were identified as “graves”, but the date and function of some are uncertain due to the large number of cenotaphs. Twenty-three features can be confidently classified as graves (15 “real” graves and 8 cenotaphs) and dated to the Late Iron Age. There is no strict organisation to the cemetery, but three broad grave groups can be identified. Graves 39 and 45 belong to grave group 1. The burial rite—as in the majority of the cemeteries from the fifth–fourth centuries BCE—was inhumation; no evidence of cremation was found. The arms of the deceased in grave 45 were crossed above the chest/stomach, which has good analogies in other Srem-group cemeteries in modern-day Serbia. The bodies were most likely interred in some kind of shroud, because traces of textile are visible on the spears in graves 48 and 70. Grave goods are typical for the period but notable finds include a necklace of ten silver beads, and a small fragment of pottery with channelled decoration (grave 71): this is similar to the Bosut III C phase settlement pottery, which has recently been associated with other Srem-group cemeteries.

Dating is based predominantly on the presence of Certosa brooches (end of the fifth century–end of the fourth century BCE, c. 420–300 BCE) and the double pin (second half of the sixth century–end of the fourth century BCE, c. 550–300 BC, and sporadically after the third century BCE). It should be emphasized that there is no evidence of a direct connection between the cemetery (displaying mixed cultural material dating roughly to 420–300 BCE) and the Celtic settlement (c. 230–100 BCE). Based on the predominant inhumation burial rite and analogues of certain artefacts (such as the Certosa brooch, silver beads and burnished graphite decorated vessel), the cemetery can be linked culturally to the Srem group. However, there are also some elements (e.g. the contracted burial rite) that suggest connections with the Early Iron Age

Vekerzug culture and finds of Balkan origin (such as the omega-shaped/double pin), which have analogies in the Celtic milieu. In summary, the cemetery can be associated with the younger phase of the Srem-group/Bosut III C phase/late LTA–B1 (c. 420–300 BCE).

A petrous bone from a mature female aged 50–55 years (obnr 36) in grave 45, who wore two brooches and an unusual necklace comprising ten silver beads, yielded sample I18259 (female).

Source of samples: Móra Ferenc Múzeum, Szeged

Author of entry: Zoltán Pilling and Ferenc Ujvári

Reference: Pilling, Z. and Ujvári, F. 2012. Iron Age settlement and cemetery from Szeged-Kiskundorozsma: some new data on Iron Age burial rite at the southern part of the Great Hungarian Plain, in S. Berecki (ed.) *Iron Age Rites and Rituals in the Carpathian Basin. Proceedings of the International Colloquium from Târgu Mureş, 7–9 Oct. 2011*, 217–48. Târgu-Mureş: Mega.

Tiszavasvári-Városföldje Jegyzőtag, Szabolcs-Szatmár-Bereg County, Hungary

In 1983–5 and 1989, rescue excavations in advance of sand mining were undertaken by Eszter Istvánovits (Museum András Jósa, Nyíregyháza) at the southern slope of a more or less north-east/south-west orientated sandhill near Tiszavasvári, in north-east Hungary. Part of a multi-period site, with burials from the Early Bronze Age, Late Iron Age and Imperial Age, and settlement from the early Migration Period, were recovered (Istvánovits 1990; 1999; Dani 1997; Almássy 1998).

The sandhill was not high and rose only slightly above the surrounding watercourses. A total of 20 La Tène graves were excavated: 12 inhumations (one with the skeleton in a contracted position) and 8 cremations (1 inside an urn and 7 without urns). The rest of the cemetery had largely been destroyed by sand extraction. Based on the finds and the funeral rite, the dead buried here belonged to a community that, in addition to the La Tène culture, also showed Early Iron Age characteristics (in this region the so-called Scythian period or Vekerzug culture of the north-eastern part of the Carpathian Basin).

The petrous bone of an individual aged 32–36 years (inv. 2001.11.2) in Grave 5 (Szathmáry 1990) was successfully analysed for aDNA and yielded sample I18226 (female), dating to c. 320–200 BCE. Grave goods included typical La Tène bracelets, anklets and a composite-belt, but bronze “buttons” found around and under the head are not common in the La Tène repertoire.

Source of samples: Museum András Jósa, Nyíregyháza

Author of entry: Katalin Almássy

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Tokod–Altáró, Komárom–Esztergom County, Hungary

A Late Iron Age inhumation grave was found at an unspecified location near the mineshaft of Erzsébet-akna during mining (and associated works) in 1956 (Horváth et al. 1979, 332). Other small-scale rescue excavations in this area, which has been subject to mining throughout the twentieth century, have recovered pits belonging to an Early Iron Age settlement, Late Iron Age sunken-featured buildings, and the stone walls of a Roman villa (Horváth et al 1979, 331–40).

A petrous bone from the Late Iron Age inhumation (IAP066; inv/ 12967) yielded sample I25524 (male). This individual (Köhler et al. 2007, Tab. 1), who had a trepanned skull, was accompanied in the grave by a plate, a bowl and a small pot (Horváth et al 1979, Pl. 23: 2, 8–9) dating to the La Tène period.

Source of samples: Hungarian Natural History Museum, Department of Anthropology, Budapest

Author of entry: Károly Tankó and Anna Szécsényi-Nagy

References:

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Túrkeve-Burkus-halom, Jász-Nagykun-Szolnok County, Hungary

During a preventive excavation at the Túrkeve-Burkus-Halom site in eastern Hungary in 2005, a rectangular sunken floored building was excavated; this represents the first published Iron Age building from the Nagykunság area (a characteristic historical and geographical sub-region of the Great Hungarian Plain). The slightly irregular rectangular construction had markedly rounded corners, and sloping benches on its side walls. No traces of plastered floor, nor hearth were found. The finds assemblage included 32 fragments of hand-made pottery, 50 wheel-made sherds, 2 fragments of grinding stones made from volcanic rock, large amounts of burnt clay (many with branch impressions) and animal bones. The ceramics show a mix of local Early Iron Age traditions and La Tène ceramic styles. Based on the diagnostic finds, the

building can be dated to the middle La Tène period, between the LTB2–C1 (320–200 BCE) Kovács 2018, 95–8).

The skeleton of an individual, aged 30/40 years (Szeniczey and Hajdu 2018, 115–18), lay in an oval pit under the floor in the south-east corner of the building. From the position of the skeleton (legs curved backwards, arms crossed in front of the chest), it seems as if the individual had been tied and was thrown into the pit. The anthropological examinations revealed no traces of trauma on the skeleton, though irregularly-positioned skeletons have been interpreted as the result of unusual events or acts, such as homicides or sacrifice (Kovács 2018, 97–8). A petrous bone from this individual (3121; Obj. 2/S13, 38205) was successfully analysed for aDNA and yielded sample I18220 (female).

Source of samples: Damjanich János Múzeum

Author of entry: Péter F. Kovács

References:

Kovács, F.P. 2018. La Tène-kori településrészletek a Közép-Tisza-vidékről: Tiszapüspöki–Holt-Tisza-part, Túrkeve-Burkus halom, Szolnok-Vegyiművek körzet [La Tène Age Settlement Sections from the Middle Tisza Region Tiszapüspöki – Holt-Tisza part, Túrkeve – Burkushalom, Szolnok – Vegyiművekkörzet (Szolnok-Chemical factory district)]. *Tisicum* 26: 93–114.

Szeniczey, T. and Hajdu, T. 2018. A Túrkeve-Burkus halom környéke – MOL 3. lelőhelyen feltárt kelta kori nő embertani vizsgálatának eredményei/The results of the anthropological analysis of a woman excavated in the vicinity of Túrkeve-Burkus-halom – MOL 3 archaeological site. *Tisicum* 26: 115–18.

Zamárdi (sites 56 and 89), Kútvolgyi-dűlő, Somogy County, Hungary

In 2005, Ásatárs Ltd investigated four sites on road no. 65101, which encircles Zamárdi. The sites (nos. 89, 59/a, 58/b, and 56) in Zamárdi, Kútvolgyi-dűlő are situated along a north–south orientated watercourse heading towards Balaton. At the southernmost site (no. 56.), measuring 8260m², 474 features spanning five archaeological periods were recorded. Early and Late Bronze Age settlement remains of the Somogyvár-Vinkovci and Urnfield Cultures, a La Tène mixed rite cemetery, a Roman period vicus and a Middle and Late Avar period settlement and iron smelting area were found (the Avar period industrial site being one of the largest in Central Europe) (Gallina 2011; Gallina et al. 2007a; b).

A total of 19 La Tène graves were excavated: 16 inhumations and 3 cremations (2 inside an urn and 1 without urn). Based on orientation and size, two additional features lacking human remains could also have been graves belonging to the cemetery. The inhumation graves were oriented south–east/north–west (with a few exceptions) and the bodies were lying in supine position.

Grave goods included bronze chain-link necklaces, iron and bronze fibulae (including button fibulae, Dux-type fibulae and fibulae where the foot is attached to the bow), bossed bracelets and anklets, sapropelite bracelets/arm-rings, bronze knobbed anklets and, occasionally, finger rings. Male burials were characterized by iron belts. With the exception of three graves, all individuals were interred with vessels, with one or two usually placed near the head or the feet. Grave 34 contained an animal jaw. Folded iron swords were recovered from a cremation urn and a scattered cremation grave (nos. 37 and 118), whilst another cremation grave contained the largest number (5) of ceramic vessels, dress ornaments and a figurine. Graves within the

cemetery do not show significant differences in orientation or in grave goods, and based on the finds and the funeral rite, the cemetery can be dated to the LTB2–C1 period (third–second centuries BCE).

In the northern sites at Zamárdi (i.e. sites 89, 58/a and 58/b) remains of a settlement were recorded, which dated mainly to the LTD period (100–1 BCE), meaning that the cemetery was not established and used by its inhabitants.

Petrous bones from nine individuals were successfully analysed for aDNA; eight from the LTB2–C1 period (third–second centuries BCE) cemetery at site 56 and one Late Bronze Age individual from site 89.

From site 56: sample I25509 (female) derives from an individual (IAP051) aged 30–35 years in Grave 21; sample I25510 (female) derives from an individual (IAP052) aged 30–40 years in Grave 32; sample I25512 (female) derives from an individual (IAP054) aged 30–40 years in Grave 41; sample I25516 (male) derives from an individual (IAP058) aged 30–40 years in Grave 133; sample I25517 (female) derives from an individual (IAP059) aged 40–50 years in Grave 143; sample I25518 (female) derives from a child (IAP060) aged 1–2 years in Grave 368; sample I25519 (male) derives from an individual aged 23–40 years in Grave 395; and sample I25522 (female) derives from another child aged 1–2 years in in Grave 451. All of the individuals were interred with ceramic and metal artefacts, with the exception of the individual in Grave 395, who was not buried with any grave goods.

From site 89, sample I25523 (male) derives from a child aged 4–5 years in Grave 599. The body was in a crouched position and was not accompanied by any grave goods, but stratigraphic analysis of the grave fills suggests a Late Bronze Age date.

Source of samples: Hungarian Natural History Museum, Department of Anthropology, Budapest and Museum Rippl-Rónai, Kaposvár

Author of entry: Krisztina Somogyi, Anna Szécsényi-Nagy, Tamás Hajdu and Zsolt Gallina

References:

Gallina, Zs., Hornok, P. and Somogyi, K. 2007a. Előzetes jelentés a Zamárdi, Zamárdit elkerülő 65101. sz. út 89., 58/a., 58/b., 56. lelőhelyeinek feltárásáról/Preliminary report of the excavations of the 89, 58/a, 58/b, 56. sites on the encircling road No. 65101. around Zamárdi. *Somogy Megyei Múzeumok Közleményei* 17/A (2006), 153–68.

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ISLE OF MAN

Strandhall, Rushen, Isle of Man

The sampled remains were found in a short cist. While many such cists have been found on the Isle of Man, only around 20 with well-preserved human remains have been excavated and recorded to a good standard, of which only five included unburnt remains. The site at Strandhall (Manx National Heritage NMHER 57) was excavated in 1983 by Larch Garrad who prepared two reports lodged with the Manx Museum Library along with notes and photographs from the excavation. The site contains two sets of human remains. The reports remain unpublished.

The short cist is situated on a 'low hill with a surprisingly wide view' (Garrad, n.d.a) and was discovered when a plough displaced the capstone. A course of stones to the south of the cist may derive from a kerb, with a projected arc implying a mound 10m in diameter, though no mound was extant at the time of excavation. The cist was 1.05m long and 0.4m wide, oriented north-north-east/south-south-west. It contained c. 5% of the unburnt skeletal remains of a 10–13 year old child (accession number 1983-65; Gamble 2017). The excavator considered the remains to be part of a crouched inhumation, but the finders had moved some of the bones prior to the excavation. A thumbnail scraper, flint flakes, and shells from land snails (possibly intrusive) were found in the cist. A tooth from the child has been radiocarbon dated to 3685 ± 28 BP (OxA-37603; 2195–1973 cal BCE). This burial is the only known case of the inhumation of a child from this period on the Isle of Man, although there are contemporaneous burials of the cremated remains of children.

Beyond the projected kerb, roughly 2m east of the cist, and sharing the same alignment, was a stone-lined trench c. 0.75m wide and 7m long. A substantial amount of cremated bone (accession 1983-0201) was found at the south end. A sherd of an Early Bronze Age Cordoned Urn along with shells from limpets, winkles, and common garden snails (the latter possibly intrusive) lay within the trench (Garrad n.d.b.). The bone could derive from a single individual and a tooth suggests an age at death of c. 16–22 years, based on wear (though this is tenuous). A sample of long bone was radiocarbon dated to 3859 ± 29 BP (OxA-36596; 2459–2206 cal BCE).

Sample I8582 (female) derives from the left first maxillary molar of the 10–13 year old child in the short cist (1983-65). The tooth has also yielded stable isotope readings of -20.65 for $\delta^{13}\text{C}$ and 11.8 for $\delta^{15}\text{N}$. These results reflect diet before the age of 10 years and the nitrogen value suggests some consumption of marine foods (Ashley Coutu, pers. comm.). The site will be reported on fully in a monograph summarizing the work of the Round Mounds of the Isle of Man project.

Source of sample: Allison Fox, Manx Museum

Author of entry: Chris Fowler and Michelle Gamble

References:

Gamble, M. 2017. *Strandhall, Rushen. Human Osteology Report*. Unpublished manuscript, Manx National Heritage.

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NETHERLANDS

Bovenkarspel-Het Valkje, Noord-Holland, Netherlands

In the 1970s, large-scale settlement excavations were carried out at Bovenkarspel-Het Valkje (BVK74). Though several formal burial locations were encountered (Roessingh 2018), many human bone fragments and even complete skeletons were also found in settlement ditches. A

very special find was the discovery of two complete skeletons buried in a Late Bronze Age ditch, supposedly of a man aged 17–18 years and a woman aged 16 years, stretched on their back and facing each other (IJzereef 1981; Runia 1987).

A petrous bone from the female individual (V45A), during excavation nicknamed Julia, yielded sample I20062 (female), dating to 2710 ± 35 BP (GrN-7509; 920–806 cal BCE) and representing a late deposition in the abandoned and filled-in settlement ditch. Recent analysis of strontium and oxygen isotopes gave a mixed signal. The strontium isotope compositions of the M1, M2 and M3 are compatible with the local environment; however, the oxygen isotope compositions suggest residential stability, but not in the Bovenkarspel region (Kootker 2019). More background oxygen isotope data is, however, needed to confirm this interpretation.

Source of samples: Provinciaal depot voor archeologie Noord-Holland, Castricum

Authors of entry: Harry Fokkens and Lisette Kootker

References:

Kootker, L.M. 2019. *Isotopenonderzoek Naar de Herkomst van Julia, een Meisje uit Bronstijd Bovenkarspel, Project Het Valkje*. Unpublished report, Castricum.

Roessingh, W. 2018. *Dynamiek in Beeld. Onderzoek van Westfriese Nederzettingen uit de Bronstijd*. Leiden: Sidestone Press.

Runia, L.T. 1987. Analysis of bone from the Bronze Age site of Bovenkarspel-Het Valkje, the Netherlands: a preliminary report. *Archaeometry* 29(2): 221–32.

IJzereef, G.F. 1981. *Bronze Age Animal Bones from Bovenkarspel*. Nederlandse Oudheden 10.1. Amersfoort: Rijksdienst voor het Oudheidkundig Bodemonderzoek.

Hoogkarspel-Houterpolder-West, Noord-Holland, Netherlands

The excavations at Hoogkarspel (Westfrisiaweg-Houterpolder-West) were fairly recently conducted in the context of developing a new road: the Westfrisiaweg. Large-scale settlement remains were recovered, but at certain locations also the remains of burial mounds.

At Hoogkarspel-Houterpolder-West, the remains of two burial mounds were excavated. Mound 1 contained no central grave, but the skeleton of an individual aged 20–24 years (V1027) was found on the fringes (and nicknamed ‘Drechtje’). A petrous bone from this individual yielded sample I12081 (female), dating to 3040 ± 20 BP (PSUAMS-9525; 1391–1221 cal BCE). She had suffered from iron deficiency (Pijpelink and van Spelde 2019). Isotopic analysis showed that she had moved to West-Frisia after her seventh year from an area with very low $^{87}\text{Sr}/^{86}\text{Sr}$ ratios, possibly a young or chalk-rich geological environment, probably outside the Netherlands (Kootker 2019). Seeds from two features underneath Mound 1 yielded Middle Bronze Age dates of 3030 ± 35 BP (Poz-92460) and 3035 ± 35 BP (Poz-92461), with a combined calibration of 1406–1132 BCE (Tol and Roessingh 2019).

In West-Frisia, human skeletal elements are often also found in settlement ditches outside direct or obvious burial contexts, and a petrous bone from skull fragments (V67) belonging to a 30–60 year old individual (Pijpelink and van Spelde 2019), recovered from ditch 262, yielded sample I12082 (female). Seeds from the same structural feature dated to 3070 ± 30 BP (Poz-101655; 1415–1236 cal BCE), which is in line with the date of the skeletal remains (Supplementary Table 4). Meanwhile, a tooth taken from mandible fragments containing three

teeth (V769), from an individual over 20 years old (Pijpelink and van Spelde 2019) and found in a possible Middle Bronze Age ditch (1614), yielded sample I11629 (female).

Source of sample: Provinciaal depot voor archeologie Noord-Holland, Castricum

Authors of entry: Harry Fokkens and Lisette Kootker

References:

Kootker, L.M. 2019. Bijlage 28 - Isotopenonderzoek naar het paleodieet en mobiliteit van vijf menselijke individuen uit bronstijd West-Friesland, in W. Roessingh and A.J. Tol (eds), *Archeologie langs de Westfrisiaweg. Opgravingen van vindplaatsen uit de late prehistorie, middeleeuwen en Nieuwe tijd in het tracé van de Westfrisiaweg*. Leiden: Archol bv.

Pijpelink, A. and van Spelde, F. 2019. Bijlage 16 – Onderzoek aan de menselijke resten, in W. Roessingh and A.J. Tol (eds), *Archeologie langs de Westfrisiaweg. Opgravingen van vindplaatsen uit de late prehistorie, middeleeuwen en Nieuwe tijd in het tracé van de Westfrisiaweg*. Leiden: Archol bv.

Tol, A.J. and Roessingh, W. 2019. Introductie van de onderzoeksresultaten en chronologie, in W. Roessingh and A.J. Tol (eds), *Archeologie langs de Westfrisiaweg. Opgravingen van vindplaatsen uit de late prehistorie, middeleeuwen en Nieuwe tijd in het tracé van de Westfrisiaweg*, 55–8. Leiden: Archol bv.

Molenaarsgraaf, Zuid-Holland, Netherlands

In 1966 and 1967 a small Late Neolithic–Early Bronze Age settlement was excavated (h 1967/1.) on the Schoonrewoerd stream ridge near Molenaarsgraaf, in the Rhine-Meuse Delta. Apart from one or two possible house plans, three human burials and an ox-burial were found. These burials have become famous in Dutch archaeology because they were well-preserved inhumations and represent clear examples of people buried ‘Bell Beaker style’ in flat graves in a settlement. The layers around the house contained many Bell Beaker and Barbed Wire Beaker potsherds, indicating occupation dating to 2200–1900 BCE.

Petrous bones from three individuals were successfully analysed for aDNA. The first was from an individual aged c. 15 years (Skeleton 1), who was laid on his left side in a crouched position, facing south, in Grave I (dug right next to house I), and yielded sample I13025 (male), dating to 3635±40 BP (GrN-5131; 2136–1892 cal BCE; Louwe Kooijmans 1974). This accords well with a late Veluvian style Bell Beaker positioned at his feet. A fin-ray found in/near his throat may have been the cause of his death. The second was from Grave II, which has become famous because it appears to be the grave of a ‘fisherman’, containing three bone fishhooks, some flint tools and an antler tool, possibly used to lift fish-traps (Louwe Kooijmans 1974). The 18–24 year old individual (Skeleton 2) in this grave lay in a crouched position on the left side, facing west, and yielded sample I13026 (male), dating to 3630±40 BP (GrN-5566; 2135–1890 cal BCE). Recent research indicates that both individuals, but especially Skeleton 2 (sample I13026), probably suffered from vitamin D deficiency during childhood (Veselka 2018).

The third individual (Skeleton 3) probably was only 1.5 years old and yielded sample I13027 (female). She was placed on her right side in a pit that was far larger than the body. A small nail-decorated atypical Beaker was added as a grave good (Louwe Kooijmans 1974, 261). One of the legs showed signs of deformation, probably due to vitamin D deficiency (Veselka 2018). The body is dated to 3700±25 BP (PSUAMS-7847; 2197–1983 cal BCE), which is in the same range as the other individuals from Molenaarsgraaf. They all seem to represent an occupation

phase between c. 2150 and 1980 cal BCE, in line with the Bell Beaker pottery found in the graves.

Source of samples: Luc Amkreutz, National Museum of Antiquities (Leiden)

Authors of entry: Harry Fokkens, Luc Amkreutz and Barbara Veselka

References:

Louwe Kooijmans, L.P. 1974. *The Rhine/Meuse Delta; four studies on its prehistoric occupation and Holocene geology*. *Analecta Praehistorica Leidensia*. Vol. 7. Leiden: Instituut voor Prehistorie.

Veselka, B., 2018. *Menselijke skeletresten Molenaarsgraaf. Fysisch Antropologische Beschrijving*. Unpublished report Stichting LAB, Leiden.

Nijmegen-Lent, Gelderland, Netherlands

Between 2006 and 2009, the Bureau Archeologie en Bodemkwaliteit of the municipality of Nijmegen excavated part of a small Early Iron Age cemetery at 'Lentseveld' (Nijmegen-Lent Lv9). Four inhumation and eight cremation graves were excavated, but more graves may have been present in the cemetery. The four inhumation burials show a number of similarities in terms of construction (irregular pit, no cist) and prone body position, suggesting that they are all roughly contemporary (van den Broeke and Daniël 2011; van den Broeke 2014). The cemetery was situated on an infilled gully or depression which was, again, later overlain by clay layers (Heunks and van den Broeke 2011).

Two teeth were successfully analysed for aDNA. A 23–34 year old individual (V73) in grave 1 yielded sample I12903 (female), but could not be AMS-dated due to a lack of surviving collagen (van den Broeke and Daniëls 2011, 21). The other tooth derived from a 19–34 year old individual (V79) in grave 5, and yielded sample I12905 (female), dating to 2425±40 BP (GrA-47271; 752–401 cal BCE). Her head was ornamented with several bronze rings, and an iron ring was found near her hip.

Source of samples: Bureau Archeologie en Monumenten Bodemkwaliteit

Authors of entry: Harry Fokkens, Joep Hendriks and Eveline Altena

References:

Heunks, E. and van den Broeke, P.W. 2011. Aardkundige aspecten, in P.W. van den Broeke, J.A. den Braven, and A.A.W.J. Daniël (eds), *Een ijzertijdgrafveld en een erf uit de Ottoonse tijd in het Lentseveld. Archeologisch onderzoek in Nijmegen-Lent*, 15–24. Nijmegen: Archeologische Berichten Nijmegen-Rapport 24.

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van den Broeke, P.W. 2014. Inhumation burials: new elements in Iron Age funerary ritual in the southern Netherlands, in A. Cahen-Delhay and G. De Mulder (eds.), *Des espaces aux esprits. L'organisation de la mort aux âges des Métaux dans le nord-ouest de l'Europe*. Études et Documents, Archéologie 32, 161–83. Namur: Institut du patrimoine wallon.

Oostwoud-De Tuithoorn, Noord-Holland, Netherlands

In 1956 and 1957, Prof. van Giffen excavated two Late Neolithic–Early Bronze Age burial mounds at Oostwoud-De Tuithoorn. In total, 12 well preserved skeletons were recovered, dating to three episodes of activity in the period c. 2340–1780 cal BCE (Fokkens et al. 2017).

A petrous bone from Sk232, buried during the last episode of use of tumulus II, yielded sample I20063 (female), which provided an Early Bronze Age date of 3530±25 BP (GrN-8801; 1944–1766 cal BCE). In 1956, the skeleton was lifted as a block, since it was laid out on a mat of bulrushes; it is now however in a much-degraded state and hardly accessible for physical anthropological study. Runia (1987, 218) suggested female sex (now confirmed by aDNA) and an age of 24–35 years, which concords with its crouched position, on the right side, with head facing north, since at Oostwoud this was typical for female interments (Fokkens et al. 2017). Strontium and oxygen isotope analyses demonstrated residential stability in childhood in the Oostwoud region or a region with comparable geological and geographical conditions.

Source of samples: Provinciaal depot voor archeologie Noord-Holland, Castricum

Author of entry: Harry Fokkens

References:

Fokkens, H., Veselka, B., Bourgeois, Q., Olalde, I. and Reich, D. 2017. Excavations of Late Neolithic arable, burial mounds and a number of well preserved skeletons at Oostwoud-Tuithoorn; a re-analysis of old data. *Analecta Praehistorica Leidensia* 47: 95–150.

Runia, L.T. 1987. *The Chemical Analysis of Prehistoric Bones. A Paleodietary and Ecoarcheological Study of Bronze Age West-Friesland*. Oxford: British Archaeological Reports International Series 363.

Ottoland-Kromme Elleboog, Zuid-Holland, Netherlands

The site of Ottoland-Kromme Elleboog (h 1892/7.) is located on the same Schoonrewoerd stream ridge as the Molenaarsgraaf site, and is situated only a few kilometres east of it. Probably it is part of a contemporaneous group of Bell Beaker–Barbed Wire Beaker period settlements. A small excavation was conducted in 1969 by Louwe Kooijmans (Louwe Kooijmans 1969; 1974). In addition to a possible house plan, two human burials were found just north of the settlement, and ten years later a third. The two individuals found in 1969 were buried in one grave-pit.

According to Louwe Kooijmans (1974, 312) the burial pit, oriented north-east/south-west, contained ‘... a recently partly disturbed skeleton in a crouched position, lying exactly on its left side, its head to the east and facing south’. A tooth from this skeleton (Skeleton II) yielded sample I12900 (male). One of the long bones of this individual, aged 26–35 years, was dated to 3820±45 BP (GrN-6384; 2457–2145 cal BCE) (Louwe Kooijmans 1974, 312 and unpublished ¹⁴C form).

The bones of Skeleton I had been manipulated, with only 25% of the body present, including skull fragments, fragments of the lower limbs and vertebrae. They were laid in a heap in the western part of the burial pit (Louwe Kooijmans 1974, 312). A petrous bone from this individual, aged 18+ years, yielded sample I13028 (male).

Source of samples: Luc Amkreutz, National Museum of Antiquities (Leiden)

Authors of entry: Harry Fokkens, Luc Amkreutz and Barbara Veselka

References:

Louwe Kooijmans, L.P. 1969. Ottoland. *Nieuwsbulletin van de Koninklijke Nederlandse Oudheidkundige Bond* 7, 71.

Louwe Kooijmans, L.P. 1974. *The Rhine/Meuse Delta: Four Studies on its Prehistoric Occupation and Holocene Geology. Analecta Praehistorica Leidensia. Vol. 7.* Leiden: Instituut voor Prehistorie.

Tiel-Medel-De Reth, Gelderland, Netherlands

A Roman Period cemetery was excavated by VUHbs at Tiel-Medel-De Reth (TL-M3A-16). The cemetery was located on a levee bordering a residual gully in the river area and comprised 32 cremations and 7 inhumations (van Renswoude et al. 2019, 177).

A tooth from an individual aged c. 20 years (Smits and van Kampen 2019) from grave 1091 was successfully analysed for aDNA. This yielded sample I11631 (male), dating to 2015±30 BP (Poz-101607; 95 cal BCE–cal CE 109), although the cemetery appears not to have been in use before CE 50; this therefore represents one of the oldest graves in the cemetery (van Renswoude et al. 2019).

The $^{87}\text{Sr}/^{86}\text{Sr}$ ratio and $\delta^{18}\text{O}$ ratio for this individual (M2 and M3) are compatible with the local signal, which could mean that this individual grew up in the region, but since similar values are also present in other alluvial regions of the Netherlands, mobility cannot be excluded (Kootker 2019).

Source of samples: VUHbs, Beesd

Authors of entry: Harry Fokkens, Diederick Habermehl and Eveline Altena

References:

Kootker, L.M. 2019. Isotopenanalyse. Paleomobiliteit en paleodieet, in D. Habermehl, J.C.G. van Kampen and J. van Renswoude (eds), *Opgravingen te Tiel-Medel-Hazenkamp en -De Reth. Twee grafvelden uit de Romeinse tijd en nederzettingssporen uit de Late IJzertijd, vroeg-Romeinse tijd en laat-Romeinse tijd*, 608–22. Amsterdam: VUHbs archeologie.

Smits, E. and van Kampen, J.C.G. 2019. Menselijk bot, in D. Habermehl, J.C.G. van Kampen and J. van Renswoude (eds), *Opgravingen te Tiel-Medel-Hazenkamp en -De Reth. Twee grafvelden uit de Romeinse tijd en nederzettingssporen uit de Late IJzertijd, vroeg-Romeinse tijd en laat-Romeinse tijd*, 575–92. Amsterdam: VUHbs archeologie.

van Renswoude, J., Habermehl, D. and van Kampen, J.C.G. 2019. Sporen, structuren en fasering, in D. Habermehl, J.C.G. van Kampen, and J. van Renswoude (eds), *Opgravingen te Tiel-Medel-Hazenkamp en -De Reth. Twee grafvelden uit de Romeinse tijd en nederzettingssporen uit de Late IJzertijd, vroeg-Romeinse tijd en laat-Romeinse tijd*, 83–224. Amsterdam: VUHbs archeologie.

Uitgeest-Dorregeest, Noord-Holland, Netherlands

During excavations in Uitgeest-Dorregeest (R9560-13), a small circular ditch, possibly surrounding a very low mound, was found near to a Late Iron Age/Roman period settlement. A tooth from a child aged around c. 8 years, and nicknamed ‘Aak’, in the central grave (V25-4-13) yielded sample I12907 (male), dating to 2160±30 BP (GrN-25639; 356–57 cal BCE) and demonstrating that the mound must have been present before the start of settlement activity around 100 BCE (de Koning 2016, 555).

Source of samples: Provinciaal depot voor archeologie Noord-Holland, Castricum

Author of entry: Harry Fokkens

Reference: de Koning, J. 2016. *Terug naar Dorregeest, Uitgeest-Dorregeest, offerplaats, nederzetting en kerk. Bewoning en grafritueel vanaf de late ijzertijd tot de late middeleeuwen*. Hollandia reeks 500. Zaandijk: Uitgeverij Batenburg.

Veere-N57, Zeeland, Netherlands

Several excavations were conducted in the municipality of Veere, in the course of redeveloping Rijksweg 57 between Vrouwenpolder and Middelburg (Dijkstra 2011). A skeleton was unearthed at Rijksweg 57-location 8, buried in a grave (S140) that was dug into a peat layer but not detectable during excavation. The skeleton, of an individual c. 22–40 years old (Maesen 2011), was incomplete, but still somewhat in anatomical position. A long bone from this individual yielded sample I12906 (female), dating to 2186±34 BP (UA-38019; 375–121 cal BCE). The grave is possibly related to nearby Middle Iron Age settlement activity (Dijkstra 2011).

Source of samples: Provinciaal Depot voor Bodemvondsten Zeeland, Middelburg

Authors of entry: Harry Fokkens, Bernard Meijlink and Eveline Altena

References:

Dijkstra, J. 2011. De ontwikkeling van de bewoning vanaf de Midden-IJzertijd tot en met de Late Middeleeuwen, in J. Dijkstra and F.S. Zuidhoff (eds), *Kansen op de kwelder. Archeologisch onderzoek op en rond negen vindplaatsen in het nieuwe tracé van Rijksweg 57 en de nieuwe rondweg ter hoogte van Serooskerke (Walcheren)*, 58–82. Amersfoort: ADC Archeoprojecten.

Maesen, K. 2011. Fysisch antropologisch onderzoek, in J. Dijkstra and F.S. Zuidhoff (eds), *Kansen op de kwelder. Archeologisch onderzoek op en rond negen vindplaatsen in het nieuwe tracé van Rijksweg 57 en de nieuwe rondweg ter hoogte van Serooskerke (Walcheren)*, 419–23. Amersfoort: ADC Archeoprojecten.

Velsen-Hofgeesterweg, Noord-Holland, Netherlands

In 1978 rescue excavations at Velsen-Hofgeesterweg revealed the remains of two or three Bronze Age burial mounds. The mounds were located in arable land on a dry salt-marsh and were eroded to a considerable degree before being covered by peat and dune sand deposits (Kleijne 2015, 34). Tumulus A was a multi-period barrow surrounded by narrow ditches and post circles. No central burial was found, but in total, 10 interments (three cremations and seven inhumations) were recovered.

Two petrous bones were successfully analysed for aDNA, from individuals laid supine in grave pits without cists in tumulus A (letter of R. Perizonius 1979 cited by Kleijne 2015, 34). That from the individual in grave 3 yielded sample I20057 (female). The skeleton was incomplete and poorly preserved, but the age was estimated at 18+ years (Veselka 2018). Grave 3 yielded a date of 2950±80 BP (GrN-9867; 1396–932 cal BCE), based on wood presumably from the coffin (Kleijne 2018). The individual in grave 4 yielded sample I20058 (male). The age of this individual was estimated at approximately 7 years (Veselka 2018). Charcoal collected from another inhumation (grave 1) in tumulus A, produced a Middle Bronze Age date of 3010±10 BP (GrN-9867; 1297–1209 cal BCE) (Kleijne 2015).

Source of samples: Provinciaal depot voor archeologie Noord-Holland, Castricum

Authors of entry: Harry Fokkens and Jos Kleijne

References:

Kleijne, J.P. 2015. *Kennemerland in de Bronstijd. Inventarisatie en Synthese van Archeologische Vindplaatsen*. Castricum: Provinciebestuur Noord-Holland.

Kleijne, J.P. 2018. *Drie Vensters op Velsens Bronstijd*. Kiel: MAK Notitie 1.

Veselka, B. 2018. *Menselijke Resten uit Velsen-Hofgeest*. Leiden: Fysisch Antropologische Rapportage, Stichting Lab.

Velsen-Hoogoventerrein, Noord-Holland, Netherlands

In 1965, the Rijksdienst voor het Oudheidkundig Bodemonderzoek excavated an area (25-AN-40) prior to the extension of blast furnaces at Velsen (now Tata Steel). The skeleton of an individual, aged 20–29 years, was found in a very small grave (and was nicknamed *Hoogovenman*). Recent physical anthropological research, however, states that ‘the results are not convincingly male... Probably the skeleton is of a male individual, but this needs to be verified by DNA-research’ (van der Linde 2018). This person was buried in a remarkable position: namely in a combined prone and crouched position, and in an east-west orientation. It was a solitary grave (de Koning et al 2019).

A tooth from this individual (obj9537-01) was successfully analysed for aDNA, yielding sample I17750 (female). She appears to have been buried in arable land, and later overlain by further arable land in the Iron Age. An initial radiocarbon date of 2275 ± 65 BP (GrN-5485; 509–171 cal BCE) was considered a little too early, given the archaeological context, and this was confirmed by a second date of 2070 ± 30 BP (Poz-101600; 169–9 cal BCE; de Koning et al. 2019); the latter date has been used here for analysis. She appears to have been suffering from juvenile idiopathic arthritis, which may have been the cause of death (van der Linde 2018). Isotopic studies showed that she was probably raised locally (or at least within the region) and had a stable diet during the first 16 years of her life (de Koning et al. 2019).

Source of samples: Provinciaal depot voor archeologie Noord-Holland, Castricum

Author of entry: Harry Fokkens and Jean Roefstra

References:

de Koning, J., Kootker, L.M., Van der Linde, C.M. and Roefstra, J. 2019. Nieuw onderzoek naar het ‘vergeten graf’ van Velsen-Hoogoven, in *De Archeologische Kroniek van Noord-Holland 2018*, 121–3. Haarlem: Province of Noord-Holland.

van der Linde, C.M. 2018. *Eenzaam begraven op het Hoogoventerrein; Onderzoek Naar een Skelet uit de IJzertijd*. Unpublished Huis van Hilde report, Castricum.

Vlaardingen-Krabbeplas, Zuid-Holland, Netherlands

In 1990, children playing near the artificial lake *de Krabbeplas* discovered a human skeleton. The *Krabbeplasman*, as he was named, was c. 40 years old at death (van de Broeke and Hoogland 1992). A tooth from this individual (6.017_000150) was successfully analysed for aDNA as part of the current study and yielded sample I17019 (male), with a Middle Bronze Age date of 3060 ± 40 BP (GrN-18960; 1421–1216 cal BCE) (van den Broeke and Hoogland 1992). There were no indications for a grave and the area was sparsely inhabited, with just a few indications of Bronze Age settlement activity (van den Broeke and Hoogland 1992; Eijsskoot et al. 2011).

Source of samples: Vlaardings Archeologisch Kantoor

Authors of entry: Harry Fokkens, Tim de Ridder and Eveline Altena

References:

Eijskoot, Y., van der Heiden, M., Torremans, R., Vredenburg, A.H.L. and van Toledo, E. 2011. Sporen en fenomenen, in Y. Eijskoot, O. Brinkkemper and T. de Ridder (eds), *Vlaardingen-De Vergulde Hand-West. Onderzoek van archeologische resten van de middenbronstijd tot en met de late middeleeuwen*, 23–52. Vlaardingen: RCE Rapportage Archeologische Monumentenzorg 200.

van den Broeke, P.W. and Hoogland, M.L.P. 1992. Een menselijk skelet uit Vlaardingen-West. Bronstijdbewoning in het veengebied. *Terra Nigra* 124: 7–13.

Wervershoof-Zwaagdijk, Noord-Holland, Netherlands

During a programme of land reallocation in 1961, bones ‘of a cow’ were found by workmen. These were, however, soon determined to be human, and an excavation was carried out by Dr. Modderman, then of the State Archaeological Service of the Netherlands (Modderman 1964). The site has become known as Zwaagdijk, though Wervershoof-Zwaagdijk is probably more precise. During the excavations (partly also a watching brief) the remains of four other graves were found, probably without a burial mound, in an area bordering a settlement dating to the seventeenth or sixteenth century BCE (Modderman 1964). Initially this was also thought to date the burials, but a sample of bone from skeleton 3 returned a date of 3210±60 BP (GrA-18886; 1618–1384 cal BCE) (Lanting and Van der Plicht 2003, 202), implying that the graves are probably younger than the charcoal in settlement ditch, but also could be contemporary. In any case they are probably older than the barrow cemetery that developed 500m to the east at Wervershoof-Eendekooi, which probably dates to 1400–1100 BCE based on the date of Wervershoof tumulus XIII De Ark (3015±55 BP (GrN-2395) for phase 2 and 2965±45 BP (GrN-2168) for phase 4) (Lanting and Van der Plicht 2003, 198).

Petrous bones from five individuals were successfully analysed for aDNA. Grave 1, the disturbed grave found by the workmen, contained the body of an individual aged 26–35 years, probably nearer 35 years (Skeleton 1, V636). This individual was about 158.8cm tall, had an abscess in the lower jaw and also evidence of a squatting facet (Veselka 2015). The left petrous bone from this individual yielded sample I26828 (female).

Skeleton 2 (V637) was also uncovered by workmen, but could be studied in situ. The right petrous bone of this individual, aged 36–49 years, provided sample I26829 (male). The right arm was stretched along the body, but the left arm was folded across the chest. The left ulna had been broken in two places but healed badly and had developed pseudoarthrosis, whilst the right ulna had also been broken and had healed, and a few ribs on the right side were also broken. All trauma could be the result of the kick of a cow or horse (Veselka 2015). This individual had developed osteoarthrosis in several joints: jaw, shoulder, spine, hip and tibia, all probably the result of intensive, repeated movements. Finally, there were several indications for infection, for instance in the ribs (Veselka 2015).

Skeleton 3 (V638), cited above as dating to 3210±60 BP (GrA-18886; 1620–1311 cal BCE), was again first discovered by workmen, and had previously been disturbed by the cutting for a drain pipe. The right petrous bone of this individual, aged 23+ years, yielded sample I26830 (male). A bronze rapier of type Saint-Triphon (Butler 1964; 1990, 102) was found in the grave, whilst examination of the bones by Runia in the early 1980s revealed a matchbox with four amber beads (Runia 1986, 137), a piece of worked flint, a piece of sandstone and a small animal bone (Runia 1987, 223), though there is no further record of these finds.

Skeleton 4 (V639) was poorly preserved. The left petrous bone of this individual, aged 16–18 years, yielded sample I26831 (female). The poor preservation of the bones made further analysis of pathology impossible.

Grave 5 contained the skeleton of an individual aged 6–6.5 years (Skeleton 5, V639A). The child had been laid on their back, with the knees bent upwards towards the chest. During its early years the child had suffered from rickets, and had also developed *cribra orbitalia*, often associated with chronic anaemia. This could be related to food (vitamin D and C, iron) deficiencies, but also to malaria. It is possible that malaria was present in West-Frisia in the Bronze Age (Veselka 2015). The left petrous bone of this individual yielded sample I26832 (female).

Source of samples: Provinciaal depot voor archeologie Noord-Holland, Castricum

Authors of entry: Harry Fokkens and Barbara Veselka

References:

Butler, J.J. 1964. The bronze rapier from Zwaagdijk, gemeente Wervershoof, Prov. North-Holland. *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 14, 37–43.

Butler, J.J. 1990. Bronze Age metal and amber in the Netherlands (I). *Palaeohistoria* 32, 47–110.

Lanting, J.N. and J. Van der Plicht, 2003. De ¹⁴C Chronologie van de Nederlandse Pre- en Protohistorie IV: Bronstijd en Vroege IJzertijd. *Palaeohistoria* 43/44, 117–246.

Modderman, P.J.R. 1964. Middle Bronze Age graves and settlement traces at Zwaagdijk, Gemeente Wervershoof, Prov. North Holland. *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 14, 27–35.

Runia, L.T. 1986. Zwaagdijk. *Bulletin van de Koninklijke Nederlandse Oudheidkundige Bond* 85(3), 137–8.

Runia, L.T. 1987. *The Chemical Analysis of Prehistoric Bones. A Paleodietary and Ecoarcheological Study of Bronze Age West-Friesland*. Oxford: British Archaeological Reports International Series 363.

Veselka, B. 2015. *Fysisch Antropologische Analyse van het Menselijk Skeletmateriaal uit Zwaagdijk-Wervershoof*. Leiden: Stichting LAB.

Westwoud-Binnenwijzend, Noord-Holland, Netherlands

The excavations at Westwoud-Binnenwijzend (Westfrisiaweg-Binnenwijzend 102) were fairly recently conducted in the context of developing a new road: the Westfriaweg. Large-scale settlement remains were recovered, but at certain locations also the remains of burial mounds.

Petrous bones from three later interments in a small part of a burial mound found at Westwoud-Binnenwijzend were successfully analysed for aDNA. At least two episodes of use are represented by Grave 3, and by Graves 1, 2 and 4, respectively (see below; Jezeer 2019, 209). The 36–45 year old individual from Grave 3 (V200) yielded sample I11973 (female), dating to 3065±30 BP (Poz-86327; 1415–1230 cal BCE); the 30 year old individual from Grave 1 (V156) yielded sample I11971 (female), dating to 2915±30 BP (Poz-82551; 1210–1015 cal BCE); and

the 50–65 year old individual from Grave 2 (V220) yielded sample I11972 (male), dating to 3155±30 BP (PSUAMS-7788; 1501–1319 cal BCE). All had been suffering from more or less severe arthrosis of the back (Pijpelink and van Spelde 2019). The woman in Grave 3 (sample I11973) was probably born outside West-Frisia, in a region with high $^{87}\text{Sr}/^{86}\text{Sr}$ ratios. This could include areas with boulder clay near the surface, or areas with older rock formations in the subsoil, such as Scandinavia or the UK (Kootker 2019).

Source of samples: Provinciaal depot voor archeologie Noord-Holland, Castricum

Authors of entry: Harry Fokkens and Lisette Kootker

References:

Jezeer, W. 2019. Vindplaats Binnenwijzend: landschap, sporen en structuren, in W. Roessingh and A.J. Tol (eds), *Archeologie langs de Westfrisiaweg Opgravingen van vindplaatsen uit de late prehistorie, middeleeuwen en Nieuwe tijd in het tracé van de Westfrisiaweg*, 185–232. Leiden: Archol bv.

Kootker, L.M. 2019. Bijlage 28 - Isotopenonderzoek naar het paleodieet en mobiliteit van vijf menselijke individuen uit bronstijd West-Friesland, in W. Roessingh and A.J. Tol (eds), *Archeologie langs de Westfrisiaweg. Opgravingen van vindplaatsen uit de late prehistorie, middeleeuwen en Nieuwe tijd in het tracé van de Westfrisiaweg*. Leiden: Archol bv.

Pijpelink, A. and van Spelde, F. 2019. Bijlage 16 - Onderzoek aan de menselijke resten, in W. Roessingh and A.J. Tol (eds), *Archeologie langs de Westfrisiaweg. Opgravingen van vindplaatsen uit de late prehistorie, middeleeuwen en Nieuwe tijd in het tracé van de Westfrisiaweg*. Leiden: Archol bv.

Westwoud-Markerwaardweg, Noord-Holland, Netherlands

The excavations at Westwoud-Markerwaardweg (Westfrisiaweg-Binnenwijzend 102) were fairly recently conducted in the context of developing a new road: the Westfriaweg. Large-scale settlement remains were recovered, but at certain locations also the remains of burial mounds.

At Westwoud-Markerwaardweg, a flat grave (feature S82-1-5181, V1758) contained the prone body of a 26–35 year old. Sex determination was difficult, most indications pointed to male, but there were also specifically female elements (Pijpelink and van Spelde 2019). A petrous bone from this individual yielded sample I12083 (female), dating to 2945±30 BP (Poz-92466; 1260–1048 cal BCE; Tol and Roessingh 2019). Her isotopic signature (M2) indicated that she had moved to West-Frisia after her eighth year, probably from considerable distance (Kootker 2019).

Source of samples: Provinciaal depot voor archeologie Noord-Holland, Castricum

Authors of entry: Harry Fokkens and Lisette Kootker

References:

Kootker, L.M. 2019. Bijlage 28: Isotopenonderzoek naar het paleodieet en mobiliteit van vijf menselijke individuen uit bronstijd West-Friesland, in W. Roessingh and A.J. Tol (eds), *Archeologie langs de Westfrisiaweg. Opgravingen van Vindplaatsen uit de Late Prehistorie, Middeleeuwen en Nieuwe Tijd in het Tracé van de Westfrisiaweg*. Leiden: Archol bv.

Pijpelink, A. and van Spelde, F. 2019. Bijlage 16: Onderzoek aan de menselijke resten, in W. Roessingh and A.J. Tol (eds), *Archeologie langs de Westfrisiaweg. Opgravingen van*

vindplaatsen uit de late prehistorie, middeleeuwen en Nieuwe tijd in het tracé van de Westfrisiaweg. Leiden: Archol bv.

SCOTLAND, UK

Applecross, Highland, Scotland, UK

An Iron Age multiple grave at Applecross, on the west coast of Scotland, contained the remains of at least four adult males, buried within and below a low mound of beach cobbles. Radiocarbon dates suggest that the dead were deposited over several centuries, and many of the bones had become disarticulated, leading to some uncertainty over the original number of burials.

Three human petrous bones were successfully analysed for aDNA yielding: sample I3566 (male; GENSCOT92) dating to 2070 ± 31 BP (SUERC-73990; 170 cal BCE–cal CE 10); sample I3567 (male; GENSCOT93) dating to 2075 ± 31 BP (SUERC-73991; 173 cal BCE–cal CE 8); and sample I3568 (male; GENSCOT94), dating to 1980 ± 28 BP (SUERC-73992; 42 cal BCE–cal CE 119).

Source of sample: Applecross excavation archive

Author of entry: Ian Armit

Reference: Dagg, C. 2015. *Applecross Old Estate Office. Archaeological Investigation*. Unpublished Data Structure Report.

Broxmouth, East Lothian, Scotland, UK

Broxmouth hillfort was a complex, long-lived settlement on the East Lothian coastal plain, south-east Scotland, occupied between approximately 600 BCE and CE 200 (Armit and McKenzie 2013; Canmore ID 58800). The human remains from the site fell into four groups: a small inhumation cemetery located outside the northern ditch of the hillfort; three isolated inhumations within the hillfort interior; disarticulated human remains from various contexts; and a single, later inhumation that post-dates the abandonment of the site.

Six human petrous bones from the burials within the inhumation cemetery were successfully analysed for aDNA. These yielded sample I16422 (male) from Skeleton 12, dating to 2180 ± 30 BP (SUERC-24252; 364–121 cal BCE); sample I2693 (male) from Skeleton 5, dating to 2095 ± 30 BP (SUERC-24248; 197 cal BCE–cal CE 1); sample I2695 (male) from Skeleton 7, dating to 2180 ± 30 BP (SUERC-21990; 364–121 cal BCE); sample I2696 (female) from Skeleton 9, dating to 2155 ± 30 BP (SUERC-24250; 355–55 cal BCE); sample I16416 (male), from Skeleton 10, dating to 2130 ± 30 BP (SUERC-21991; 346–51 cal BCE); and sample I16503 (male) from Skeleton 14, dating to 2135 ± 30 BP (SUERC-24257; 349–51 cal BCE). The last two samples were shown to be father and son: from their context, within a double burial, it is apparent that Skeleton 10 was the father and Skeleton 14 (a juvenile) the son. As a result, sample I16416 has been excluded from the analysis.

Three further human teeth from the inhumation cemetery were also sampled. Two failed due to extreme contamination: these were from Skeleton 6, dating to 2150 ± 30 BP (SUERC-24249; 360–90 cal BCE), and Skeleton 13, dating to 2215 ± 30 BP (SUERC-24256; 390–190 cal BCE). The third, from Skeleton 11, dating to 2110 ± 30 BP (SUERC-24251; 204–46 cal BCE), failed due to low coverage.

Two human petrous bones and a tooth deriving from the individual inhumations within the hillfort interior were successfully analysed for aDNA. The petrous bones yielded sample I2692

(female) from Skeleton 1, dating to 2395±30 BP (SUERC-21988; 727–396 cal BCE); and sample I2694 (female) from Skeleton 3, dating to 2175±30 BP (SUERC-24247; 361–110 cal BCE). The tooth yielded sample I16498 (female) from Skeleton 2, dating to 2430±30 BP (SUERC-24246; 750–404 cal BCE).

A human tooth from a disarticulated human skull (Fragment 19) found within the hillfort interior was also successfully analysed for aDNA, yielding sample I16504 (male), dating to 1983±24 BP (SUERC-97411; 42 cal BCE–cal CE 116).

Source of samples: National Museums Scotland

Author of entry: Ian Armit

Reference: Armit, I. and McKenzie, J. 2013. *An Inherited Place: Broxmouth Hillfort and the South-East Scottish Iron Age*. Edinburgh: Society of Antiquaries of Scotland.

Bu, Orkney, Scotland, UK

Excavation of a large stony mound at Bu in 1978 revealed the remains of a massive drystone-walled Atlantic Roundhouse dating to the mid-first millennium BCE (Hedges 1987; Canmore ID 1483). Following the disuse of the main structure, a semi-subterranean souterrain was constructed against the exterior of its east wall. The eventual collapse of this structure filled the interior with rubble (Phase IIb), within which were found the partial remains of two adult individuals and isolated bones belonging to at least two children and an infant (Hedges 1987, 123–4). A petrous bone from one of the adults (OM 1982.330.321; Bu 78, 13, 5) was successfully analysed for aDNA, yielding sample I2982 (male). This skeleton had been dated to 2260±29 BP (SUERC-68733; 395–207 cal BCE). A second petrous, from a neonatal individual (OM 1982.330.330; Bu 78, 31, 2), was also successfully analysed, providing sample I2983 (female). This individual dates to 2271±33 BP (SUERC-69075; 399–207 cal BCE).

Source of sample: The Orkney Museum

Author of entry: Ian Armit

Reference: Hedges, J.W. 1987. *Bu, Gurness and the Brochs of Orkney. Part 1: Bu*. Oxford: British Archaeological Reports (British Series) 163.

Carding Mill Bay II, Oban, Argyll and Bute, Scotland, UK

At Carding Mill Bay II (56°24'30"N, 5°29'31"W), shell midden deposits filling a narrow crevice at the base of a relict sea cliff were excavated between 1991 and 1993. Cultural remains from the midden deposits included Neolithic pottery, bones of domestic livestock and disarticulated human remains (Bartosiewicz et al. 2010).

Six human bones were successfully analysed for aDNA, providing the following samples:

I12313 (female), tooth, undated

I12314 (female), metacarpal, 4830±25 BP (PSUAMS-5772; 3651–3528 cal BCE)

I12315 (female), scapula, 4840±30 BP (PSUAMS-5773; 3701–3528 cal BCE)

I12316 (female), vertebra, 4830±25 BP (PSUAMS-5774; 3651–3528 cal BCE)

I12317 (male), tooth, 4725±25 BP (PSUAMS-5775; 3629–3377 cal BCE)

I12318 (female), phalanx, 4830±25 BP (PSUAMS-5776; 3651–3528 cal BCE)

Samples I12314, I12315, I12316 and I12318 were found to be genetic duplicates of one another and the data have been merged under sample I12314 for the purposes of reporting and analysis. The combined date of these samples is 4832±14 BP (3647–3533 cal BCE).

The individuals represented by samples I12313 and I12314 are possibly first degree relatives.

Source of sample: University of Edinburgh

Author of entry: Clive Bonsall

Reference: Bartosiewicz, L., Zapata, L. and Bonsall, C. 2010. A tale of two shell middens: the natural versus the cultural in 'Obanian' deposits at Carding Mill Bay, Oban, western Scotland, in A.M. VanDerwarker and T.M. Peres (eds) *Integrating Zooarchaeology and Paleoethnobotany: A Consideration of Issues, Methods, and Cases*, 205–25. New York: Springer.

Coneypark Cairn (Cist 1), Stirling, Scotland, UK

This is an Early Bronze Age short cist (Canmore ID 46189), set within a mound, containing the partial remains of an adult male under 30, probably around 24 years of age (Individual A), along with fragments of a skull and mandible from a second individual (Individual B), described in the published report as 'female or small, delicately-boned male' aged c. 21–23 years or older (Dorothy Lunt in Thomson 1978, 8; contra Archibald Young's identification of Individual B as a child, on the same page). There were traces of burning on two bones of the right leg of Individual A, and on the mandible of Individual B. Unfortunately, the discoverers did not record the position of the remains. The cist and mound were discovered in January 1879 during gravel quarrying. No artefacts were found. A petrous temporal from Individual A was successfully analysed for aDNA: sample I16412 (male). This individual has been directly dated to 3679±28 BP (SUERC-80274; 2141–1966 cal BCE) and 3634±28 BP (SUERC-80275; 2266–2034 cal BCE), with a weighted mean of 3657±20 BP (2134–2056 cal BCE). It has not been included in the analysis due to its low coverage. A skull fragment from Individual B has been dated to 524±28 BP (SUERC-80279; cal CE 1325–1441) but this may be an aberrant date.

Source of sample: The Stirling Smith Art Gallery and Museum

Author of entry: Alison Sheridan

Reference: Thomson, J.K. 1978. A Bronze Age cairn at Coneypark, Stirling. *Glasgow Archaeological Journal* 5(1): 1–8.

Cumledge (Auchencraw Park), Scottish Borders, Scotland, UK

This Iron Age short cist, orientated north-west–south-east, was excavated in 1950 (Calder 1950; Canmore ID 58574). It contained the remains of a contracted skeleton of a young adult, osteologically identified as a female, lying on the left side (but disturbed by the finders). A large ring of cannel coal or shale was found in the area of the upper half of the skeleton (NMS X.FN 186).

A molar from the skeleton was successfully analysed for aDNA, yielding sample I5474 (female). The skeleton dates to 2030±35 BP (GrA-27298; 151 cal BCE–cal CE 77; Sheridan 2004, 176).

Source of sample: National Museums Scotland

Author of entry: Alison Sheridan

References:

Calder, C.S.T. 1950. Report on a Bronze Age grave discovered on Cumledge Estate near Duns. *History of the Berwickshire Naturalists Club* 32(1): 46–8.

Sheridan, J.A. 2004. The National Museums' of Scotland radiocarbon dating programmes: results obtained during 2003/4. *Discovery and Excavation in Scotland* 5: 174–6.

Embo, Highland, Scotland, UK

The site at Embo is a Neolithic passage tomb of Orkney-Cromarty type (Canmore ID 15376), featuring two chambers, their passages facing away from each other (Henshall and Taylor 1957; Henshall and Wallace 1963; Henshall and Ritchie 1995, 135–40 and Appendix 2). There is also evidence for Chalcolithic and Early Bronze Age activity at the monument, in the form of a cist inserted between the chambers (Henshall and Taylor 1957) and a second cist constructed in the southern chamber (Chamber I; Henshall and Ritchie 1995, 138).

Four human bones that are assumed to be of Neolithic date (including one whose Neolithic date has been confirmed through ^{14}C dating) have been analysed for DNA (Sheridan et al. 2018), with three being part of a Wellcome Trust-funded project at the Natural History Museum (Olalde et al. 2018; Brace et al. 2019); the fourth, GENLAB295 (NMS X.unreg.; NMS sample Embo 5, Box 3, Ch IIa, Sk h), is reported here, and consists of the right petrous temporal of an adult, aged around 30. This skull fragment was found in the southern chamber, among material relating to a second phase in its use (Chamber Ib), and was allocated to Skeleton ‘h’ by osteologist R.G. Inkster (Henshall and Ritchie 1995, Appendix 2). Note that the provenance for this, and for another sample from skeleton ‘h’, is incorrectly stated as Ch IIa on the sample label (and in Sheridan et al. 2018, 7). It was selected for analysis to check whether it was indeed from the same individual as a left petrous temporal from an adult male (the sex determined from DNA analysis) labelled as ‘skeleton h’, as seems likely (Sheridan et al. 2018, 7: NMS sample Embo 4, Wellcome sample Embo 2, SB516A3/I6765). The results of DNA analysis of this petrous, sample I19286 (male; GENLAB295, NMS sample Embo 5), dating to 4455 ± 22 (SUERC-95467; 3331–3022 cal BCE), demonstrate that it does not belong to the same individual.

Other bones from Embo have been dated to between the thirty-fifth century BCE (Sheridan and Schulting 2020) and around the twenty-second century cal BCE (Henshall and Ritchie 1995, 75), with the other DNA-analysed bone (sample I6765) from ‘skeleton h’ providing a date of 4403 ± 31 BP (SUERC-67259; 3263–2877 cal BCE) (Bownes 2018, 191).

Source of samples: National Museums Scotland

Author of entry: Alison Sheridan

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Hornish Point, South Uist, Scotland, UK

Excavation of an eroding coastal midden at Hornish Point, South Uist, in 1984, revealed the remains of several superimposed drystone buildings and associated features of broadly Iron Age date (James and McCullagh 2003; Canmore ID 9913). The incomplete remains of a juvenile skeleton were distributed between four pits under the floor of a wheelhouse-like building, along with parts of two cattle and two sheep, all young. This individual, aged 12 years±20 months at death, displayed diagonal chop-marks to the fourth and fifth lumbar vertebrae, made with a sharp blade (Barber et al. 1989; Lee 2003). That these two sharp-force blows to the lower back are likely to have been the cause of death (Tucker 2012, 518), rather

than relating to the post-mortem division of the body, is suggested by the fact that vertebrae adjacent to the cut ones were present, in articulation, in the pit in question. The body appears to have decomposed substantially before being placed into the pits, suggesting that this individual had been subject to complex and protracted mortuary rituals prior to eventual burial (Armit 2012, 204–8). Histomorphological examination of the right femur shaft by Dr Tom Booth revealed that the body probably retained some soft tissue when deposited in the pits (unpublished report in NMS; see also Booth 2016). The animal deposits, which show butchery marks, are likely to represent the debris of ritualised feasting activity associated with the foundation of the building.

A left metacarpal from the juvenile individual was successfully analysed for aDNA, yielding sample I2699 (male). The skeleton is dated to 2050±30 BP (SUERC-24241; 159 cal BCE–cal CE 26).

Source of sample: National Museums Scotland

Authors of entry: Ian Armit and Alison Sheridan

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Tucker, F. 2012. *Woven into the Stuff of Other Men's Lives: The Treatment of the Dead in Iron Age Atlantic Scotland*. Unpublished PhD thesis, University of Bradford <https://bradscholars.brad.ac.uk/handle/10454/5327>

House of the Binns, West Lothian, Scotland, UK

Excavation of an eroding quarry face in the grounds of the historic House of the Binns, revealed a stone cist containing the remains of two inhumations (Rhodes and Jones 2016). The primary burial, an adult male c. 30–50 years at death, had been disturbed by the insertion of a secondary burial of a young adult male. This secondary inhumation was crouched on his left side and wearing a penannular iron brooch.

Petrous bones from each of the two skeletons were successfully analysed for aDNA. The primary, disturbed inhumation yielded sample I27384 (male), dating to 2010±30 BP (SUERC-

50518; 90 cal BCE–cal CE 110). The secondary inhumation yielded sample I27385 (male), dating to 1984±28 BP (SUERC-50519; 43 cal BCE–cal CE 117).

Source of sample: National Trust for Scotland

Author of entry: Ian Armit and Daniel Rhodes

References:

Rhodes, D. and Jones, E. 2016. Cist behind the Binns: the excavation of an Iron Age cist burial at the House of the Binns, West Lothian. *Proceedings of the Society of Antiquaries of Scotland* 146: 103–12.

Howe of Howe, Orkney, Scotland, UK

Excavation of a large stony mound known as the Howe of Howe, from 1978–82, uncovered the remains of a multi-phase Iron Age broch tower overlying a Neolithic chambered tomb (Ballin Smith 1994; Canmore ID 1731). Numerous human remains were recovered from the Iron Age deposits, ranging from complete and partial bodies to disarticulated elements. None appear to represent formal burials. One metatarsal and two teeth from three individuals stratified in Phase 7 deposits were successfully analysed for aDNA; one of which is reported here (the other two falling outside the chronological range of the current study). All relate to individuals deposited after the main use of the broch tower, during a period when its structural fabric had become unstable.

A tooth, from the skeleton of an adult aged around 35–45 years at death, buried in rubble within the rampart cell of the North-West Building Yard (OM 1978–82, HH81, SF4546, 1251), yielded sample I2799 (male). This individual is dated to 2052±26 BP (SUERC-68732; 152 cal BCE–cal CE 22), and is stratigraphically the earliest of the three sampled individuals.

Source of sample: The Orkney Museum

Author of entry: Ian Armit

Reference: Ballin Smith, B. (ed.) 1994. *Howe. Four Millennia of Orkney Prehistory: Excavations 1978–1982*. Edinburgh: Society of Antiquaries of Scotland Monograph Series 9.

Law Road, North Berwick, East Lothian, Scotland, UK

Excavation of a substantial square cist at Law Road, North Berwick, uncovered the remains of four inhumations of Late Iron Age date (Richardson et al. 2005). Two adult males (Skeletons C46 and C51) and a female around 16–18 years of age at death (Skeleton C50) appeared to have been displaced for the burial of an adult female (Skeleton C47), wearing an iron brooch. One of the males (C46) had been buried with a bone-handled iron knife.

Four human petrous bones were successfully analysed for aDNA, yielding sample I16418 (male), from Skeleton C46, an ulna from which dated to 2019±30 BP (SUERC-94959; 97 cal BCE–cal CE 107); sample I16499 (male), from Skeleton C51, a humerus from which dated to 2103±30 BP (SUERC-94958; 337–43 cal BCE); sample I16413 (female), from Skeleton C47, a humerus from which dated to 1987±29 BP (SUERC-94954; 44 cal BCE–cal CE 117); and sample I16495 (female), from Skeleton C50, dating to 2091±30 BP (SUERC-94953; 196 cal BCE–cal CE 3).

Source of samples: National Museums Scotland

Author of entry: Ian Armit

Reference: Richardson, P., Suddaby, I. and White, R. 2005. *Law Road/St Andrews Street, North Berwick, East Lothian. Archaeological excavation and human bone recovery, Tynefield Farm, Dunbar, East Lothian*. Unpublished Data Structure Report No. 1053, CFA Archaeology Ltd.

Macarthur Cave, Oban, Argyll and Bute, Scotland, UK

Macarthur Cave is located at the foot of cliffs in the modern town of Oban, where it was discovered during quarrying operations in 1894 (Canmore ID 23066). Although the blasting associated with these works caused such damage that it is difficult to determine the original size or shape of the cave (which cannot now be traced and may have been entirely destroyed), it seems to have been a minimum of around 10m deep by 6m wide (Anderson 1895). Human bone representing a minimum of four individuals was recovered, at least some of which appears to have been disarticulated (Anderson 1895: 216; Turner 1895: 437; Saville and Hallén 1994: 719). Radiocarbon dating has shown that, although there is artefactual material of Mesolithic date within the cave, some of the human remains date to the Middle Iron Age (Saville and Hallén 1994).

Two human metacarpals were successfully analysed for aDNA but were initially thought to derive from the same adult male individual. One of these (sample I2657), reported in Olalde et al. 2018, produced a surprisingly early (Neolithic) date of 5052±30 BP (SUERC-68701; 3955–3773 cal BCE). However, further analysis has revealed that the second metacarpal (sample I2658; male) may in fact derive from a first degree relative of the first individual. It is thus likely to be of broadly similar date. The two samples have the same mitochondrial haplogroups and may, therefore, be brothers, although it is not impossible that they could be father and son. Sample I2658 is reported here but not included in the main analysis due to its close familial relationship to sample I2657.

Source of sample: National Museums Scotland

Author of entry: Ian Armit

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Anderson, J. 1895. Notice of a cave recently discovered at Oban, containing human remains, and a refuse-heap of shells and bones of animals, and stone and bone implements. *Proceedings of the Society of Antiquaries of Scotland* 29: 211–30.

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Northton, Isle of Harris, Scotland, UK

A multi-period coastal erosion site at Northton, on the Toe Head peninsula on the south coast of Harris, was excavated by Derek Simpson in 1965 and 1966, revealing occupation deposits interleaved with layers of blown sand dating from the Neolithic to the Late Iron Age (Simpson et al. 2006; Canmore ID 10502). A number of inhumations and disarticulated bones were recovered from the Iron Age layers, though their broad date range does not suggest the presence of a coherent cemetery. Several of the Iron Age human remains were discovered in contexts thought initially to date to significantly earlier periods (ibid., 180), suggesting that the stratigraphy of the site was substantially disturbed.

A fragmentary cranium ('Find no. 35, Sk II'; Simpson et al. 2006, 183), was successfully analysed for aDNA. The left petrous temporal of this individual (NMS X.unreg) yielded sample I2824 (male). The cranium is dated to 1977 ± 29 BP (SUERC-68706; 41 cal BCE–cal CE 121). It appears to derive from an intrusive or mixed context (Simpson et al. 2006, 160).

Source of sample: National Museums Scotland

Author of entry: Ian Armit

Reference: Simpson, D. D. A., Murphy, E. M. and Gregory, R. A. 2006. *Excavations at Northton, Isle of Harris*. Oxford: British Archaeological Reports (British Series) 408.

Raschoille Cave, Oban, Argyll and Bute, Scotland, UK

Raschoille Cave is a small cave on the west coast of Scotland, near the town of Oban (Canmore ID 22924, <https://canmore.org.uk/site/22924/oban-glenshellach-road>). The cave, eroded in Precambrian slates and phyllites, lies about 13m above sea level, close to the altitudinal limit of the Holocene marine transgression. During the Neolithic, when relative sea level was still several meters higher than today, the cave occupied a position at the edge of a sheltered marine embayment. The cave entrance was exposed in 1984 when talus deposits were cleared during construction work. A rescue excavation was undertaken by members of the local archaeological society.

The uppermost deposits within the cave consist mainly of loose angular slate debris derived from mechanical breakdown of the roof and walls of the cave. Within these stony deposits the excavators recognized several stratigraphic units ('layers I–VII'), based on variations in the size and alignment of the rock fragments, the amount of interstitial soil material, the degree of compaction of the material, and the presence/absence of calcareous coatings or deposits within the material. It is debatable, however, whether these 'layers' have any real chronological value.

Archaeological remains were found mainly in layers II–V, with the greatest concentration of material in layers III–IV. They comprised disarticulated human bones and small numbers of animal bones, fish bones, marine shells, and carbonized plant remains. Since no articulated groups of human bones were recovered, most likely their presence in the cave was the result of secondary burial of excarnated remains.

The surviving collections comprise approximately two thousand identifiable bones, fragments and teeth from at least 20 individuals, including both adults and children. Twenty-eight AMS ^{14}C measurements on postcranial bones ostensibly from different individuals (Bonsall 2000; Bownes 2018; Olalde et al. 2018) range from 4980 ± 50 BP to 4415 ± 25 BP (c. 3760–3040 cal BCE), which date the burial activity in Raschoille Cave to the earlier part of the Neolithic in western Scotland. Here, we report new paleogenetic data from one disarticulated petrous portion of a temporal bone recovered from Layer IV: sample I3139 (female; ORC_IVa_88.10). This adds to data from nine individuals recovered from various 'layers' of the cave reported in Olalde et al. (2018).

Source of Sample: Alison Sheridan, National Museums Scotland

Author of Entry: Clive Bonsall

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Thurston Mains, Innerwick, East Lothian, Scotland, UK

A trapezoidal short cist containing the tightly contracted remains of two adult females, buried with their heads at opposite ends of the cist, was excavated in 1939 (Stevenson and Low 1940; Canmore ID 58918). Osteological examination by Low concluded that Skeleton 1 (lying on its left side) was that of a female aged around 30 years (NMS X.EQ 479A), while Skeleton 2 (lying on its right side) was around 35 years old (NMS X.EQ 479B). The position of the skeletons shows that the bodies were buried simultaneously. A flint knife and a short-necked Beaker were found in the cist. Both skeletons have been sampled for aDNA and, given problems of contamination associated with the initial analysis of both skeletons, multiple samples have been taken from both.

Skeleton 1 has produced samples as follows: sample I2413 (right metatarsal; female; GENSCOT13, subsequently re-sampled as I16446/TB185); sample I5471 (tooth; female); and sample I16447 (right tibia; female; TB186). Sample I2413 and I5471 are reported here and included in the analysis. Skeleton 1 has been dated twice: 3721 ± 33 BP (OxA-13097; Sheridan 2004) and 3547 ± 29 BP (SUERC-75915, from the right metatarsal from which sample I2413 derives: Sheridan et al. 2018). Although they produce a weighted mean of 3624 ± 22 BP (2114–1900 cal BCE), it is suspected that the OxA date of 2269–1985 cal BCE may be the most accurate since it is closest to the date for Skeleton 2 and is in line with dates for the type of Beaker found in the cist; there is no obvious reason for the discrepancy between the two dates.

Skeleton 2 has produced: sample I5472 (tooth; female), which failed analysis; and subsequently re-sampled as I16448 (female; TB187), which is reported here. Skeleton 2 has been radiocarbon-dated to 3794 ± 26 BP (OxA-13660; 2337–2138 cal BCE, from the dentine of a

maxillary tooth; Sheridan 2004). These have been excluded from the analysis due to issues relating to data quality.

Source of samples: National Museums Scotland

Author of entry: Alison Sheridan

References: Sheridan, J.A. 2004. The National Museums' of Scotland radiocarbon dating programmes: results obtained during 2003/4. *Discovery and Excavation in Scotland* 5, 174–6.

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Ulva Cave, Isle of Ulva, Argyll and Bute, Scotland, UK

Ulva Cave (56°28'04"N, 6°10'18"W), a relict sea cave on the small island of Ulva in the Inner Hebrides, has been under archaeological investigation since 1987 (Bonsall et al. 1989; Russell et al. 1995; Pickard and Bonsall 2009). A shell midden in the entrance area of the cave accumulated during an extended period from Mesolithic to Iron Age. A small number of disarticulated human remains were identified among a much larger mammalian bone assemblage. A human radius was successfully analysed for aDNA, providing sample I12312 (male), dating to 4895±25 BP (PSUAMS-5771; 3751–3636 cal BCE).

Source of sample: University of Edinburgh

Authors of entry: Clive Bonsall and Catriona Pickard

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SERBIA

Mokrin, Kikinda Municipality, North Banat, Serbia

Excavations between 1958 and 1969 of the Mokrin necropolis (also known as 'Selište-Lalina humka'), located close to the village of Mokrin, uncovered 312 Early Bronze Age graves, dating to c. 2100–1800 BCE. All of the recovered individuals were found in a flexed position, in a north–south or south–north orientation, and lying either on their right or left sides (the

latter determined by the sex of the individual). A variety of grave goods was commonly associated with the burials (Giric 1971).

Petrous bones from five individuals were successfully analysed for aDNA. Sample I23212 (female) derived from a poorly-preserved infant laid on their right side in grave 192 (P7492); this individual was not accompanied by any grave goods. Sample I23208 (female) derived from the disturbed and scattered remains of an individual buried in grave 187 (P7488); this rectangular grave, measuring 200cm x 130cm was unusually large and contained a number of grave goods, including elaborate head adornments and a copper dagger. Sample I23207 (male) derived from a well-preserved individual in grave 88 (P7487) who lay on their left side with their forearm and knees raised; the grave contained no grave goods. Sample I23206 (female) derived from a well-preserved individual lying on their right side in grave 159 (P7486), with their forearms bent towards their forehead, their lower legs drawn up towards the body and their feet missing. Grave goods included a badly preserved copper diadem, a necklace featuring a perforated dog canine and a stone amulet in the shape of a stylized bovine head, a four-handled ceramic vessel and the rib of a small animal (probably domestic dog). Sample I23205 (male) derived from a well-preserved mature individual lying on their left side in grave 226 (P7485) with their legs strongly flexed so that their feet rested close to the pelvis. They were accompanied by grave goods including a small ceramic vessel behind the right shoulder and a larger ceramic vessel behind the pelvis.

Source of samples: Ron Pinhasi, Olivia Cheronet and Lidija Milasinovic, Kikinda Museum

Authors of entry: Lidija Milasinovic and Olivia Cheronet

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Giric, M. 1971. *Mokrin – The Early Bronze Age Necropolis*. Belgrade: Archaeological Society of Yugoslavia.

Ostojicevo, Čoka Municipality, North Banat, Serbia

The Early and Middle Bronze Age ‘Stari Vinogradi’ necropolis (2100–1800 BCE), which comprises 285 graves, is located in the village of Ostojicevo. The earlier burials in the necropolis belong to the Maros culture (n=77), while the remaining 208 burials can be attributed to the late phase of the Maros culture with some Vatin and Hugelgraber culture influences. Interestingly, a large proportion of burials (n=103) were those of young children (mainly newborns and infants) interred in urns: a common Maros burial practice. The material remains unpublished and the following account is based on museum records.

Petrous bones from three individuals were successfully analysed for aDNA. Sample I23211 (female) derives from partially damaged grave 285 (P7491) which contained only a skull and a ceramic vessel. Sample I23210 (female) derives from the poorly-preserved flexed skeleton of a mature individual in grave 210 (P7490). The body was orientated south–north and lying on its right side with the hands resting in front of the face. The spinal column and pelvis were missing and there were no grave goods. Sample I23209 (male) derived from a poorly preserved partial skeleton, comprising only skull and long bones, in grave 101 (P7489), which had been disturbed during the digging of another grave (102). There were no grave goods.

Source of samples: Ron Pinhasi, Olivia Cheronet and Lidija Milasinovic, Kikinda Museum

Authors of entry: Lidija Milasinovic and Olivia Cheronet

SLOVAKIA

Bratislava Castle, Bratislava, Slovakia

Over many years of archaeological research, a significant Late La Tène settlement has been documented in the area of Bratislava Old Town, on the castle hill and in the castle grounds. The intensity and structure of this settlement suggest an *oppidum* with an acropolis at Bratislava Castle (Čambal 2004; 2014; Vrtel 2012; Musilová 2017). Besides archaeological finds from the Late La Tène period (LTC2–D2; 190/175 BCE–CE 20/0) there are also exceptional skeletal material dated to the final stages of the *oppidum*'s existence. Evidence suggests that it was destroyed during a violent event: scattered human remains and the charred ruins of buildings have been discovered during excavations in the so-called destruction layer. Instead of being ritually buried, the bodies were largely randomly dumped into pits or strewn on the ground with traces of fire. Until recently it was believed that the randomly scattered human remains belong to the destruction layer associated with the war waged by the Boii against the Dacians after the death of Caesar in 44 BCE. However, the most recent discoveries indicate their possible correlation with the decline of the Roman buildings in the castle grounds during the reign of Emperor Augustus (27 BCE–CE 14) (Vrtel 2015).

Bratislava oppidum was excavated in 2008–10 and 2013–14 during construction works of the Medieval castle and the so-called Northern terrace, during which the remains of seven important Celtic-Roman masoned buildings were discovered. These were probably constructed between the years 50/40–30/20 BCE (LTD2).

A hoard of Celtic gold and silver coins with the inscriptions BIATEC and NONNOS was found in Building I. The best-preserved was Building II, inside which were eight column pedestals and numerous artefacts. Building VII, with two central pillars, was the largest. It probably served as a warehouse for precious goods. High-quality plasters were preserved in Building V and human remains, presumably from killed individuals, were found on the mortar pavement. The buildings are currently conserved and presented under protective structures in the Bratislava Castle area.

In destruction layers from the second catastrophic horizon (turn of the first century BCE/first century CE) were seven human skeletons in various, non-formal burial positions (Musilová et al. 2012; Musilová et al. 2014). The anthropological report on these individuals has not yet been published.

Petrous bones from three individuals have been successfully analysed for aDNA. These individuals were recovered from layers SJ2304, SJ2301 and SJ2302 in the interior of Building V, Area II/5.1, in the south-western part of the Northern terrace. Individual 7/14, who yielded sample I11712 (male, c. 30–39 years), lay on the floor near wall Nr. XVII. His pelvis and lower extremities were accidentally destroyed during the excavation works. An iron fibula was under the right ribs and an iron wheel-tyre nearby. In the destruction layer above the body were Roman amphorae sherds and Celtic pot sherds. Individual 8/14 (c. 50–59 years), who yielded sample I11713 (male), lay in a crouched position near wall Nr. XV in layer SJ2317. Finally, individual 9/14 (also c. 50–59 years), who yielded sample I11715 (male), was recovered from layer SJ2318.

Source of samples: Slovak National Museum – Natural History Museum

Authors of entry: Margaréta Musilová, Branislav Resutík, Alena Šefčáková, Milan Horňák and Andrej Žitňan

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Kutscherfeld Palace, Hlavné námestie 7, Bratislava, Slovakia

In spring 1994 during restoration works on Kutschersfeld Palace, Main Square 7 (Hlavné námestie 7) archaeological excavations by the Municipal Monument Preservation Institute in Bratislava (MÚOP) recovered the body of a child aged around 5 years and dating to the La Tène D2 period (c. 50 BCE). The skeleton, found in pit S1/94 in feature 12 at a depth of c. 2.27m, was in a nearly upright position, with the skull and a part of the spine in natural anatomical position in the rubble of daubed walls and scorched soil. Part of the body rested on the wall debris, with the rest buried underneath. Although burn marks were found in the surrounding sediment, there were no signs of fire on the bones. The depositional context of the skeleton suggests death in dramatic (perhaps violent?) circumstances (Lesák et al. 1995; Šefčáková 1995; Musilová and Lesák 1996).

A petrous bone from this individual (1/94) was successfully analysed for aDNA and yielded sample I11710 (female), dating to 2030±20 BP (PSUAMS-8929; 94 cal BCE–cal CE 58).

Source of sample: Slovak National Museum – Natural History Museum

Author of entry: Alena Šefčáková

References:

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Pálffy Palace, Panská 19–21, Bratislava, Slovakia

Research in 1982–1985 yielded new finds which greatly extended our knowledge of the final stages of the La Tène settlement in Bratislava (Zachar and Rexa 1988). Found in the fill of a pear-shaped pit 3b/85 (1.4–1.6m deep, with a diameter of 1.4m) were the dumped skeletons of two elderly females, the incomplete skeleton of a male, and a female skull (Gomolčák 1988), interpreted as evidence of the violent destruction of the Bratislava *oppidum*. The remains lay on the burnt wooden lining of the pit, though none showed evidence of injury. The female skull (belonging to an individual aged around 50 years at death) had, however, been placed in anatomical position on the post-cranial skeleton of the male (aged 35–45 years), indicating post-mortem manipulation of the remains.

A petrous bone from this skull (individual 1) yielded sample I11716 (female), dating to 2090±20 BP (PSUAMS-8931; 167–46 cal BCE).

Source of sample: Slovak National Museum – Natural History Museum

Author of entry: Alena Šefčáková

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Chotín IA, Komárno, Slovakia

In 1952–4, 1961 and 1962, the Archaeological Institute of the Slovak Academy of Sciences in Nitra headed by M. Dušek carried out extensive rescue excavations in Chotín, located in Horná ľanová zem (Komárno District, Nitra Region), at one of the largest cemeteries not only of the Vekerzug culture but also of the Hallstatt period in the Central Danube Region. During the five-year field campaign, two large mixed-rite cemeteries, known as Chotín IA and Chotín IB, located only 120–200m from one another, were completely excavated.

At Chotín I, 465 inhumation and cremation burials of the Vekerzug culture were recovered: 370 in Chotín IA (116 cremations and 242 inhumations, 11 cenotaphs, 1 mixed-rite multiple burial) and 95 in Chotín IB (27 cremations and 58 inhumations, 9 cenotaphs, 1 mixed-rite multiple burial). The cemeteries also included eight separate horse graves in Chotín IA and 2 such graves in Chotín IB. The total number of graves from both cemeteries was thus 475. At Chotín IA, eight further features provided evidence for funeral pyres. The function of other features containing much charcoal, charred sand and ash, located over some of the inhumation burials, may have served a similar function.

The cemeteries at Chotín I are so far the only examples from the Vekerzug culture that have been completely excavated (Dušek 1955; 1966; Kozubová 2013a; 2013b); they are comparable

only to the incompletely excavated cemetery in Tápiószele-Szumrák (East Hungary). They thus provide the possibility of complex analysis of the grave goods and funerary customs and form the basis for the study of the costumes and social structure of the local community. Indeed, anthropological analysis of human remains from almost half of the inhumation graves and several cremation graves has been undertaken by M. Prokopec in the 1960s. There are a large number of grave goods from both cemeteries, made of metal, clay, glass, amber, stone and bone/antler, and indicate that both cemeteries date to Hallstatt D1–La Tène A, and into La Tène B1. Some grave goods are typical gender-specific: weapons, horse harnesses, razors and whetstones for men's graves; whorls, clay seals, bone cylindrical objects, mirrors, flat worked stones, some types of ornaments (serpent-shaped hair-rings, fibulae) and miniature vessels for women's graves. Other grave goods occur with both sexes: some types of ornaments (bracelets and beads), tools (knives, awls) and pottery. Miniaturization and non-gender specific objects characterise the graves of children and adolescents.

Twenty Iron Age individuals (16 petrous bones and four teeth dating to c. 650–500 BCE) were successfully analysed for aDNA.

The petrous bones yielded the following samples. Sample I12099 (male) derived from an older individual buried in a seated position in grave 6 (1952). Sample I12106 (female) derived from a crouched individual in grave 27 (1952). The grave included a cup, two small bottle-shaped vessels, iron bracelets on the wrists, a cowrie shell pendant, and the skull, femur and humerus of a second individual. Sample I12098 (female) derived from a crouched burial in grave 111 (1953), with grave goods including a cup, a vase (with another miniature version inside it), one complete pot and fragments of other vessels, glass/clay/amber/bone beads, a wild boar tusk, 3 bronze spirals and a spindle whorl. Sample I5287 (female) derived from an older individual in grave 118 (1953), covered with charred sand and ash. Sample I11719 (female) derived from an older individual in grave 121 (1953), dating to 2465 ± 20 BP (PSUAMS-8932; 757–423 cal BCE). This individual had osteological changes consistent with so-called rider's syndrome (Šefčáková 2014) and the grave pit contained a horse (horse burial 4/1953). Sample I12107 (female) derived from an individual in grave 123 (1953), who was buried with a bronze bracelet on the left wrist, two iron bracelets on the right wrist, and a fragment of a small iron ring. Sample I11717 (female) derived from an older individual in grave 128 (1953), buried in a crouched position. Sample I12102 (female) derived from a child in grave 137 (1953), who was buried with 2 glass beads and a bronze ornamental plate. Sample I12104 (female) derived from a crouched individual in grave 141 (1953), who was buried with bronze bracelets on left and right wrists. Sample I5288 (male) derived from an older individual in grave 143 (1953), buried with a cup, two pottery vessels, a large vase and a decorated bone cylinder. Sample I12097 (female) was taken from a young individual in grave 162 (1953), whose grave goods included pottery vessels, a worked stone, two iron bracelets, a spindle whorl and a number of unidentified animal bones. Sample I12110 (male) derived from grave 198 (1954), which likewise contained fragments of pottery vessels. Sample I12105 (female) derived from grave 263 (1954), sample I12103 (male) from an older individual in grave 237 (1954), sample I11722 (female) from grave 243 (1954) and sample I11721 (female) from grave 275 (1954).

Four teeth were also sampled from Chotín IA. The first, from an older individual in grave 2 (1952), yielded sample I14465 (male). The skull of this individual had been moved after death to the right hip and grave goods included a pottery vessel, worked stone, two spindle whorls, fragments of several iron pins, fragments of two small iron rings, a bronze basket-shaped pendant, 12 clay beads and 2 cowrie shell pendants. The second, from grave 35 (1952), yielded sample I14464 (female). This mature individual (35a) formed a double burial with a child

(35b), which was covered by an oval feature of charred sand and ash. The third, from an infant buried in grave 113 (1953) with a cup, an amber bead necklace and a small bronze bangle, yielded sample I14467 (female). The final tooth, from grave 210 (1954) yielded sample I14468 (male). The lower limbs of this individual were found near the head and the grave was overlain by a feature comprising charred sand and ash. Grave goods included one iron bracelet on each wrist, fragments of two iron pins/awls, four bronze arrowheads, and a bronze phalera (part of horse harnesses).

Source of samples: Slovak National Museum – Natural History Museum

Author of entry: Anita Kozubová

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SLOVENIA

Grofove njive, Slovenia

The site of Grofove njive, near Drnovo, consisted of a burial mound and a possible unenclosed settlement from the later phase of the Early Iron Age (i.e. Late Hallstatt period). The site lies in the middle of the relatively broad plain of the Krka and Sava Rivers, close to the edge of the major Urnfield period settlement of Velike njive and in direct line of sight to the central hillfort of Libna, located on the hills to the north-east (Pavlovič 2014). Both sites belong to the Early Iron Age Dolenjska group, which extends over south-eastern Slovenia and northern Croatia.

The burial mound, which was surrounded by a shallow ring ditch, contained four preserved graves (1–4) containing five inhumation burials and a further grave which had been almost completely destroyed by later activity. Grave 3 had also been damaged by the subsequent construction of Grave 2. The graves can all be dated, primarily on the basis of bronze grave goods, to the Certosa horizon of the Dolenjska Early Iron Age group (second half of the sixth and first half of the fifth century BCE).

Petrous bones from each of the two individuals in Grave 1 were successfully analysed for aDNA: the eastern skeleton (PN 279) yielded sample I5689 (male), dating to 2450±20 BP (KIA-

37316; 750–415 cal BCE); while the western skeleton (PN 272) yielded sample I5690 (male), dating to 2470±25 BP (KIA-37315; 763–425 cal BCE). A tooth from the individual in Grave 2 (PN 437) yielded sample I22937 (female), dating to 2410±25 BP (KIA-37317; 729–402 cal BCE).

Source of sample: Posavski muzej, Brežice

Author of entry: Matija Črešnar, Philip Mason and Ian Armit

Reference: Pavlovič, D. 2014. Drnovo, in B. Teržan and M. Črešnar (eds.), *Absolute Dating of the Bronze and Iron Ages in Slovenia*, 491–504. Ljubljana: Univerza v Ljubljani/Narodni muzej Slovenije Catalogi et Monographiae 40.

Kapiteljska njiva, Novo mesto, Slovenia

The Kapiteljska njiva barrow cemetery is part of a major Early Iron Age complex at Novo mesto located in the middle Krka valley (Knez 1993; Križ 2019). The Marof hillfort is interpreted as the centre of this complex, although there is increasing evidence that Early Iron Age settlement extended into the area now occupied by the historic town centre of Novo mesto.

The barrow cemetery on the Kapiteljska njiva ridge, comprising at least 66 ploughed-out barrows, is partially contemporary with a Late Bronze Age Urnfield cemetery on the same location. A Late Iron Age flat cremation cemetery was also located on the eastern part of this ridge, mostly avoiding the Early Iron Age barrow cemetery. A second large Urnfield cemetery complex, comprising over 400 flat cremation graves and some flat inhumation graves, was located on the adjacent Mestne njive ridge to the east of Kapiteljske njive. A further large barrow cemetery was located at Kandija on the left bank of the River Krka to the south of the historic town centre.

Kapiteljska njiva, grave I/16 was located within the largest barrow on the site. It contained 80 inhumation burials arranged around a central drystone burial chamber, which marks it out as one of the earliest barrows in the cemetery. Grave I/16 is defined on typological grounds as being a male grave, dating to the Podzemelj II phase of the Early Iron Age in the Dolenjska region, i.e. HaC0 (mid-eighth century BCE).

A human petrous from grave I/16 was successfully analysed for aDNA, yielding sample I5691 (male), dating to 2518±28 BP (SUERC-69417; 787–544 cal BCE).

Source of sample: Dolenjski muzej, Novo mesto

Author of entry: Philip Mason, Matija Črešnar and Ian Armit

References:

Knez, T. 1993. *Kapiteljska njiva: Knežja gomila (Kapiteljska njiva: Fürstengrabhügel)*. Novo mesto: Dolenjski muzej Carniola archaeologica 1.

Križ, B. 2019. *Kapiteljska njiva: Način pokopa v starejši železni dobi (Kapiteljska njiva: Burial Rite in the Early Iron Age)*. Novo mesto: Dolenjski muzej Carniola archaeologica 8.

Kongresni trg, Ljubljana, Slovenia

The Late Bronze and Early Iron Age cemetery in Kongresni trg (Congress Square) is located in the centre of Ljubljana (Badovinac et al. 2011; Gaspari 2014; Gaspari et al. 2015). It yielded a number of flat cremation graves and five barrows constructed of river cobbles and soil. Although not unique, this is not the typical grave construction in this area, where flat cremation graves were the prevalent grave type. Each of the barrows yielded one or more cremation graves, dating to the eighth/seventh century BCE.

Several poorly-furnished inhumation graves were placed around the barrows. Although inhumation was generally absent in this area in the Early Iron Age, radiocarbon dating of two of these graves (GR 1029A and GR 1032) has confirmed that they belong to the Early Iron Age.

Two human petrous bones were successfully analysed for aDNA: Burial 1032 yielded sample I5692 (female), dating to 2550 ± 15 BP (PSUAMS-3055; 795–592 cal BCE), and Burial 1029A yielded sample I5693 (female), dating to 2550 ± 20 BP (PSUAMS-3092; 796–570 cal BCE).

Source of sample: Museum and Galleries of Ljubljana

Author of entry: Matija Črešnar, Philip Mason and Ian Armit

References:

Badovinac, D., Bekljanov Zidanšek, I., Božinović, M., Brečić, J., Erjavec, R., Hrustel, J., Hvalec, S., Masaryk, R., Porenta, S., Skorupan, J., Verbič, T., and Vojaković, P. 2011. *Report of the Archaeological Excavations on the Area of the Building of the Parking House in Ljubljana, Congress Square, vol. I-XI*. Unpublished excavation report, Ljubljana.

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Obrežje, Slovenia

The Late Bronze Age (i.e. Urnfield period) cemetery at Obrežje is one of the largest mortuary complexes of the Dobova–Velika Gorica group in the Sava valley in south-eastern Slovenia and north-western Croatia (Mason 2005). The cemetery is located on the Pleistocene and Early Holocene terrace of the River Breganščica and was excavated in advance of the construction of the international border crossing between Slovenia and Croatia in 2001–2003. The mortuary complex is associated with three major open settlement loci in the immediate vicinity. The settlement at Gorica on the Pleistocene terrace of the River Sava to the north-east of the cemetery is dated to the Bd C/D period (fifteenth–thirteenth centuries BCE), whilst the two loci on the Pleistocene terrace of the River Breganščica to the south-east and east of the cemetery are dated to the Ha B (eleventh–eighth centuries BCE). The cemetery and settlement complexes were damaged by the construction of an Early Roman vexillation fort and road, as well as by Late Medieval settlement activity.

The cemetery comprises 378 cremation graves that date to the thirteenth–eighth centuries BCE and four flat inhumation graves. The latter are confined to the central part of the cemetery, but are widely distributed within it. Following the results of the radiocarbon dating of three of the inhumations, it became evident that one is contemporary with the beginning and one with the later part of the Urnfield cremation cemetery, whilst the third dates to the later part of the Early Iron Age, when inhumation burial under barrows was the norm in this region.

Four human petrous bones were successfully analysed for aDNA. These comprised Burial SF 12623, which yielded sample I5695 (male), dating to 3086 ± 30 BP (SUERC-69437; 1423–1268 cal BCE); Burial SF 3043, which yielded sample I5697 (female), dating to 2693 ± 29 BP

(SUERC-69436; 901–805 cal BCE); Burial SF 2544, which yielded sample I5696 (male), dating to 2281±29 BP (SUERC-69438; 401–208 cal BCE); and Burial SF 2828, which yielded sample I23974 (male).

Source of sample: Posavski muzej, Brežice

Author of entry: Philip Mason, Matija Črešnar and Ian Armit

Reference: Mason, P. 2005. Obrežje MMP (International Border crossing), in Djurić, B. and Prešeren, D. (eds.), *The Earth Beneath Your Feet: Archaeology on the Motorways in Slovenia: Guide to Sites*, 208–10. Ljubljana: Institute for the Protection of the Cultural Heritage of Slovenia.

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Zagorje ob Savi, Slovenia

The Early Iron Age cemetery in Zagorje ob Savi is located at the foot of the hill known as Ocepkov hrib, where the contemporary settlement was most probably located (Draksler and Murko 2020; Nicholls et al. 2020). It lies just above the Medija stream, a tributary of the Sava, one of the major rivers of the south-east Alpine region. The site belongs to the Dolenjska Early Iron Age regional group and seems to have been active only in the Late Hallstatt period (sixth–fourth century BCE). The cemetery contains flat inhumation graves, in a region where monumental burial mounds are much more common.

The excavated area of the cemetery comprises nine flat, sub-rectangular graves. Most were lined with large dolomitic stones, and some were covered with rubble. The skeletons were laid out in a supine position with their arms and legs extended. The adults in graves 4, 5 and 8 in the central group were accompanied by two infant graves (6 and 7), positioned in very close proximity to each other. Other than their smaller size, these graves were constructed in an identical fashion to the adult graves.

Two human petrous bones and two teeth were successfully analysed for aDNA. The petrous bones yielded sample I5698 (female), from Grave 8, dating to 2499±28 BP (SUERC-69422; 776–539 cal BCE); and sample I23978 (male) from an infant burial, Grave 7 dating to 2412±29 (SUERC-69421; 742–400 cal BCE). The teeth yielded sample I22940 (male) from Grave 2 and sample I22938 (female) from Grave 5.

Source of sample: National Museum of Slovenia

Author of entry: Matija Črešnar, Philip Mason and Ian Armit

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SPAIN

El Espinoso cave, Asturias, Spain

El Espinoso cave is located in the easternmost coastal area of Asturias province (northern Spain), in the town of La Franca, municipality of Ribadedeva. The cave is located on a 20m high limestone cliff, which dominates a closed valley, near the mouth of the Cabra River, only 200m from the present shoreline. The entrance of the cave is oriented south-west, and to access it is necessary to climb a 4m-high cliff (González Morales 1995).

In the cave interior, Palaeolithic remains were discovered and excavated in the early 1980s (González Morales 1995). Radiocarbon dating and lithic typology dates this occupation to the Solutrean/Magdalenian transition (20.7k cal BP; Cuenca Solana 2013). At the end of the cavity, in a short, small room ~40m², only accessible through a low, narrow passage, abundant human remains were documented over the surface of the cave floor. No grave goods were identified. This human bone assemblage dated to the second half of the second millennium BCE, corresponding to the Cantabrian Late Bronze Age (González-Rabanal et al. 2017a).

The anthropological study of the human remains showed that the cave was used as a collective burial place to deposit individuals from different ages and sexes. 1230 human remains belonging to 20 individuals of different ages were assessed: two infants (0–3 years), four children (3–12 years), five adolescents (12–20 years), seven adults (20–50 years) and two older adults (50+ years). Sex identification was possible in twelve individuals: seven males and five females. Stature estimation gave an average height of 1.71m for males and 1.60m for females. Some pathologies were identified such as caries, dental calculus, periodontal disease, osteoarthritis and antemortem fractures (González-Rabanal et al. 2017a).

Taphonomic study of the assemblage showed poor anatomical representation and high fragmentation. The presence of short and low-density bones, such as patella, phalanges, carpal and tarsal bones, indicates the primary character of the burials. However, skulls and long bones are poorly represented, and they are widely fragmented. An anthropogenic origin for differential preservation within the deposit cannot, therefore, be excluded. This could be related to the extraction of the long bones and skulls from the cave, once the bodies had decomposed, to carry out secondary deposition elsewhere, leaving smaller and less diagnostic bones *in situ*. Significant post-depositional diagenetic processes related to water circulation and the humidity typical of surface deposits in karstic systems (González-Rabanal et al. 2017b) were also present in the bone assemblages.

Three teeth were successfully analysed for aDNA, yielding sample I20735 (male; ES23); sample I20736 (female; ES24); and sample I20740 (male; ES28). All represent second or third degree relatives of one another, and can be dated to 1300–1000 cal BCE on the basis of AMS dates obtained on other individuals within the deposit.

Source of samples: Borja González-Rabanal

Author of entry: Borja González-Rabanal, Manuel Ramón González Morales and Ana B. Marín-Arroyo

References:

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González-Rabanal, B., González Morales, M.R., Marín-Arroyo, A.B. 2017a. Anthropological and taphonomical study of human remains from the burial cave of El Espinoso (Ribadedeva, Asturias, Spain). In: T. Tomé, M. Díaz-Zorita Bonilla, A. M. Silva, C. Cunha and R. Boaventura (eds), *Current Approaches to Collective Burials in the Late European Prehistory: Proceedings of the XVII UISPP World Congress (1–7 Septiembre 2014, Burgos, Spain)*, 55–66. Oxford: Archaeopress.

González Rabanal, B., González Morales, M.R., Marín Arroyo, A.B. 2017b. La tafonomía como marco metodológico para interpretar depósitos funerarios superficiales: estudio de la cueva sepulcral de El Espinoso (Ribadedeva, Asturias). *Trabajos de Prehistoria* 74(2), 278–95.

La Fragua cave, Cantabria, Spain

La Fragua is a small cave located 125m above sea level on the south-eastern slope of Mount Buciero in Santoña, Cantabria. Excavations in 1991–6 recorded a well-defined stratigraphic sequence consisting of four archaeological units: Level 4 (Magdalenian), Level 3 (Azilien), Level 2 (archaeologically sterile) and Level 1 (Mesolithic) (Casado and González Morales 2000). A deposit of mixed material, limestone blocks, pottery, animal and human bones was identified inside a trench that cut through the entire stratigraphic sequence, and was filled in part with material from Level 1. The trench was sealed by hearths made by shepherds who used the cave in the last century. The absolute chronology of the trench is unknown today but it contained 140 sherds of pottery and 517 bones of domestic and wild fauna (Marín-Arroyo 2004); a flagstone within a small ditch appeared at the bottom.

Seven human remains were identified in the fill of the trench and included: a fragment of a right humerus, a left coxa, three hand phalanges, a right third cuneiform and a deciduous tooth. The bones belong to two individuals: one adult and one infant. The absence of bones such as crania, mandibles or long bones could indicate reopening of the trench to remove the most identifiable human bones for secondary deposition elsewhere. The flagstone could represent a marker for the original burial prior to its reopening.

An adult humerus from this assemblage yielded sample I23569 (male), which provided an Early Bronze Age radiocarbon date of 3697±30 BP (OxA-31057; 2199–1978 cal BCE; González Morales 2015).

Source of samples: Manuel Ramón González Morales, Instituto Internacional de Investigaciones Prehistóricas de Cantabria, Universidad de Cantabria

Author(s) of entry: Borja Gonzalez Rabanal, Grupo EvoAdapta, Departamento de Ciencias Históricas, Universidad de Cantabria

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Mas Castellar, Pontós, Girona, Spain

Mas Castellar is located on a 140–150m high hill overlooking the rivers Fluvià and Àlguema. It has been the subject of numerous excavation campaigns since the last decades of the twentieth century, after the surface discovery of Greek ceramics, probably from the nearby city of Empúries. The site dates from the seventh century BCE to Roman times, when it was abandoned. There are numerous storage pits from the seventh–fifth centuries BCE and a widespread destruction layer dated to the end of the fifth century BCE (Pons et al. 2005). The subsequent settlement, with Greek influence, includes an aristocratic building dated 450–425 BCE, which was uncovered in the excavations of 1992. The final phase of the settlement (250–200 BCE) sees a radical change to a more urban function, and includes two domestic houses (Piqué and Pons i Brun, 2007).

In the excavation season of 2004, several skeletal elements, corresponding probably to three different individuals, were uncovered in a context dating to the fifth century BCE. The proximity of all skeletal fragments to the defensive wall of the settlement suggest they could correspond to people that died in violent circumstances, maybe during the destruction event, although this is speculative.

An isolated adult metatarsal (MC 337) from this assemblage yielded sample I19722 (male), dating to 2335±20 BP (PSUAMS-9542; 413–382 cal BCE).

Source of samples: Bibiana Agustí, INSITU S.C.P. Centelles, Barcelona and Alba Petit, Dept. de Departament de Biologia Animal, de Biologia Vegetal i d'Ecologia, Universitat Autònoma de Barcelona

Authors of entry: Carles Lalueza-Fox, Institute of Evolutionary Biology, CSIC-Universitat Pompeu Fabra, Barcelona and Bibiana Agustí, INSITU S.C.P. Centelles, Barcelona.

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Monte Bernorio, Palencia, Spain

The fortified settlement (*oppidum*) of Monte Bernorio (municipality of Pomar de Valdivia, province of Palencia) is located on a limestone mountain that forms part of the southern foothills of the Cantabrian Mountains of northern Spain. The first archaeological discoveries were made at the end of the nineteenth century, with further work carried out in the 1940s and 1950s. The current research project ('Monte Bernorio in its environment') began in 2004 and has focused both on the settlement and the burial evidence (Torres-Martínez et al. 2016). While there is some sparse evidence from the Bronze Age, occupation at Monte Bernorio intensified

during the Iron Age, particularly in the last centuries BCE, when the upper part of the mountain was heavily fortified by a wall and ditch that enclosed an area of 28ha. Further earthworks on the slopes and at the foot of Monte Bernorio formed a multivallate system that extended the area of the site to c. 90ha. The site was destroyed by the Roman army during the course of the Cantabrian Wars launched by Emperor Augustus (29–19 BCE).

Recent excavations on a settlement terrace situated on the southern side of Monte Bernorio, next to the enclosing wall and in close proximity to one of the entrance gates of the *oppidum*, have uncovered two large buildings interpreted as house structures. A radiocarbon date obtained from the foundation level of one of the buildings provides a date of 2428 ± 34 BP (SUERC-75403; 750–403 cal BCE), but both houses were subject to several later phases of remodelling, with at least two episodes of rebuilding in House 1 and three in House 2. The buildings had a width of 8–10m and 5–6m respectively, and a rectangular shape with rounded corners. The walls had stone bases and upper parts constructed of wattle and daub. The houses were finally destroyed by fire during the attack launched by the Roman legions as part of the Cantabrian Wars, probably in 26 or 25 BCE (Fernández-Götz et al. 2018; Peralta Labrador et al. 2019).

Excavations carried out in 2006, 2007, 2013 and 2016 uncovered the remains of several perinatal individuals under the floors of the two aforementioned, remodelled buildings (cf. preliminary study in Torres-Martínez et al. 2012). House 1 contained the remains of 4 perinatal individuals (MB-1/2006, MB-2/2006, MB 3/2006, and MB-2013), in two areas located in the centre of the house, near the entrance and the hearth respectively.

In House 2, the remains of 5 individuals (MB-1/2007, MB-1/2016, MB-2/2016, MB 3/2016, and MB-4/2016) were recovered from underneath the floor in the western part of the building. The bones were found in two closely associated areas and belonged to several individuals; the manipulation of the remains suggests that they were probably buried at different times. Some of the remains seem to have been reburied during one of the episodes of rebuilding of the house structure.

Finally, the remains of a sub-adult (MB-2/2007) were recovered from between the buildings.

The discovery of the infant individuals is particularly important for our understanding of the Iron Age populations of the region. So far, they represent the only inhumations identified at Monte Bernorio. All other human remains recovered at the site are cremation burials from cemeteries located outside the upper wall of the *oppidum* (Torres-Martínez et al. 2021). The practice of burying the bodies of perinates below house floors is attested at other sites in northern Iberia during the Iron Age (Galilea and García 2002).

Long bones from five individuals were successfully analysed for aDNA. Three from House 1 yielded sample I19987 (female; MB-1/2006), dating to 2060 ± 20 BP (PSUAMS-9543; 152 cal BCE–cal CE 9); sample I19988 (female; MB-2/2006); and sample I19989 (female; MB-3/2006); while a further two from House 2 yielded sample I19990 (male; MB-1/2007), dating to 2075 ± 20 BP, (PSUAMS-9544; 160 cal BCE–cal CE 1); and sample I19991 (male; MB-2/2016).

Sample I19992, from the long bone of MB-4/2016, failed analysis. Sample I19988 was found to be a duplicate of individual MB-1/2006 and its data has been combined in the analysis with

sample I19987. Samples I21885 and I21886, derived from petrous bones from two further individuals (MB-2013 and MB1/2016), are awaiting analysis.

Source of samples: Jesús F. Torres-Martínez and Manuel Fernández-Götz

Author of entry: Jesús F. Torres-Martínez, Manuel Fernández-Götz, Silvia Carnicero-Cáceres and Olalla López-Costas

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Fernández-Götz, M., Torres-Martínez, J.F. and Martínez-Velasco, A. 2018. The battle at Monte Bernorio and the Augustan conquest of Cantabrian Spain, in M. Fernández-Götz and N. Roymans (eds.), *Conflict Archaeology: Materialities of Collective Violence from Prehistory to Late Antiquity*, 127–40. New York/Abingdon: Routledge.

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Torres-Martínez, J.F., Fernández-Götz, M., Domínguez-Solera, S., Martínez-Velasco, A., Vacas, D., Serna-Gancedo, M., Cabanillas de la Torre, G., Galeano, M. and Fernandes, R. 2021. ‘Invisible burials’ and fragmentation practices in Iron Age Europe: excavations at the Monte Bernorio necropolis (Northern Spain). *Journal of Field Archaeology* 46(6): 399–413.

WALES

Culver Hole Cave, Port Eynon, Gower Peninsula, West Glamorgan, Wales, UK

Excavations at Culver Hole Cave took place in 1883, and again in 1924–31, yielding Middle Bronze Age urns and artefacts dating also to the Roman and Early Medieval periods (Penniman 1931; 1932). The human bone assemblage consists of at least 41 individuals (Buxton 1932), which may (given the presence of the urns) date to the Bronze Age, though no detailed report on the stratigraphy has been published.

Here we report data for two individuals. Sample I16488 (male), dating to 2910±20 BP (PSUAMS-8441; 1201–1015 cal BCE), was derived from the mandible of an adult (Skeleton 25.221/2.61). Sample I16476 (female) was derived from the mandible of a juvenile (Skeleton 25.221/2.12), but is not included in the main analysis due to problems with sex ratio information.

Samples from Skeleton 25.221/2.154 and Skeleton 25.221/2.3 failed analysis. A further sample (I5364) from this site was reported in Olalde et al. (2018), though it was not included in the analysis due to contamination.

Source of sample: Jody Deacon, National Museum of Wales

Author of entry: Claire-Elise Fischer

References:

Buxton, L.H.D. 1932. Report on the human remains from Culver Hole. *Bulletin of the Board of Celtic Studies* 6(2): 198–200.

Penniman, T.K. 1931. Culver Hole Cave, Llangennith, Gower. *Bulletin of the Board of Celtic Studies* 6(1): 90–2.

Penniman, T.K. 1932. Culver Hole Cave and vicinity, Llangennith and Llanmadoc, Gower. *Bulletin of the Board of Celtic Studies* 6(2): 196–7.

Dinorben, Clwyd, Wales, UK

Dinorben hillfort was excavated by Gardner from 1912–22 and later by Hubert Savory in the 1960s and 1970s. Radiocarbon dates obtained during the 1970s led Savory to postulate a ninth or early eighth century BCE date for hillfort construction. A subsequent dating programme with closely associated and securely stratified samples, however, yielded four radiocarbon dates indicating construction in 550–400 cal BCE.

Human remains from the site comprise five articulated individuals and disarticulated fragments including nine heads or skull fragments found on the floors of three houses, in one of the guard chambers of the main entrance and in a ditch (Davis 2018).

Two disarticulated cranial fragments and one tooth were successfully analysed for aDNA, yielding: sample I16410 (petrous; female; 58.535(1103?)); sample I16514 (petrous; female; SB589A, 58.535[2]); and sample I16475 (tooth; male; 58.535/1151). I16410 and I16514 have been excluded from the analysis due to low coverage.

A further petrous bone (SB590A; 58.535[1912–22]) and a tooth (58.535/1501), dating to 1739±22 BP (UBA-44577; 247–401 cal CE), failed analysis.

Source of sample: Jody Deacon, National Museum of Wales

Author of entry: Claire-Elise Fischer

References:

Davis, O. 2018. Iron Age burial in Wales: patterns, practices and problems. *Oxford Journal of Archaeology* 37: 61–97.

Harding, D. 2013. *Iron Age Hillforts in Britain and Beyond*. Oxford: Oxford University Press.

Ogof Rhiwledyn, Little Ormes Head, Llandudno, Conwy, Wales, UK

Ogof Rhiwledyn, also known as North Face Cave, was excavated in 1962–76 and again in 2015, yielding artefacts as well as human and animal bones (Blore 2012; 2017). Artefacts included pebbles, slate and antler tools, and an amber bead which could be Early–Middle Bronze Age in date (Blore 2012). The bone assemblage comprised many mammals: some would have used the cave as refuge, some species would have been brought in by predators, but there were also butchered remains brought in by humans (Blore 2012). The human remains belong to at least four individuals: a 4 year old, an 8–9 year old, a 10–12 year old and an adult (Blore 2012). Part of a maxilla which could belong to the 10–12 year old individual was recovered in 2015. It produced a Middle Bronze Age of 3065±36 BP (SUERC-

62072; 1415–1228 cal BCE; Blore 2017). This date is complemented by the artefactual assemblage, as well as the discovery, in 1986, of a Bronze Age Copper mine less than 5km away from Ogof Rhiwledyn.

Here, we report sample I16479 (tooth; indeterminate sex; Skeleton 2000.50H/6) but it is not included in the main analysis due to low data coverage.

Source of sample: Jody Deacon, National Museum of Wales

Author of entry: Claire-Elise Fischer

References:

Blore J.D. 2012. *Archaeological Excavation at North Face Cave Little Ormes Head, Gwynedd 1962–1976*. Wallasey, privately published.

Blore J.D. 2017. *Radiocarbon Date for the Human Remains from North Face Cave, Little Orme's Head, Gwynedd*. Wallasey, privately published.

Orchid Cave, Llanferres, Denbighshire, Wales, UK

Orchid Cave was excavated in 1981, yielding Neolithic artefacts and faunal remains. It also yielded human remains (MNI=3), corresponding to an adult (male), a young individual and further undetermined individual. A direct radiocarbon date of 4170 ± 100 BP (OxA-3817; 2876–2680 cal BCE) on a pelvis bone confirms the Neolithic date. Here we report data for sample I16491, a tooth found in situ in a disarticulated mandible (male; TB261, 92.23H/42). It has not been included in the analysis due to mitochondrial contamination.

Source of sample: Jody Deacon, National Museum of Wales

Author of entry: Claire-Elise Fischer

References:

Aldhouse-Green, S. et al. 1996. Holocene humans at Pontnewydd and Cae Gronw caves. *Antiquity* 70: 444–7.

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Davies, M. 1981. *Identification of bones from Orchid Cave, Maeshafn, Clwyd*. Unpublished report, Nature Conservancy Council.

Guilbert, G. 1982. Orchid Cave. *Archaeology in Wales* 22: 15.

Llanmaes, Llantwit Major, Glamorgan, Wales, UK

Excavations at Llanmaes took place from 2003–2010, yielding Late Bronze Age and Early Iron Age remains including socketed axes, and fragments from cauldrons and bowls (Waddington et al. 2019). This site is remarkable for its high proportion of pigs, most of them probably imported, which are interpreted as the remains of feasting. Moreover, the presence of Armorican axes, a decorated Hallstatt bracelet and a handled cup highlight wider sea-borne contacts and the presence of feasting participants travelling by sea as well as by land. Among the deposits human bones were found, corresponding to at least to three individuals: two (possibly three) juveniles and a single adult (Gwilt et al. 2016). Human bone from a disarticulated human bone group (88 fragments) yielded a direct radiocarbon date of 2059 ± 31 BP (UB-7340; cal 164 BCE–cal CE 20). A human petrous temporal (SB585A) was successfully analyzed for aDNA, yielding sample I6771 (female), dating to 2080 ± 25 BP

(SUERC-97787; 169 cal BCE–cal CE 2). Sample I16471 (female) from a human tooth (TB233; HM04(032)A11) has been excluded from the analysis due to low coverage.

Source of sample: Jody Deacon, National Museum of Wales; Selina Brace

Author of entry: Claire-Elise Fischer and Tom Booth

References:

Gwilt, A., Lodwick, M., Deacon, J., Wells, N., Madgwick, R. and Young, T. 2016. Ephemeral Abundance at Llanmaes: Exploring the Residues and Resonances of an Earliest Iron Age Midden and Its Associated Archaeological Context in the Vale of Glamorgan, in J.T. Koch and B. Cunliffe (eds), *Celtic from the West 3. Atlantic Europe in the Metal Ages: Questions of Shared Language*, 294–329. Oxford: Oxbow Books.

Waddington, K., Bayliss, A., Higham, T., Madgwick, R. and Sharples, N. 2019. Histories of deposition: creating chronologies for the Late Bronze Age–Early Iron Age transition in Southern Britain. *Archaeological Journal* 176(1): 84–133.

RAF St. Athan, Glamorgan, Wales, UK

Excavations at RAF St. Athan took place in 2003 and yielded archaeological remains from the Bronze Age to the Medieval period, with a focus of occupation in the Middle–Late Iron Age. Archaeological remains from the Iron Age comprised a sub-square enclosure containing roundhouses, hearths and the remains of three inhumations. Two of these were excavated by machine, so little is known about their burial context of burial, whilst the third was from a pit located at the rear of the enclosure (opposite the entrance) and contained only the legs of an adolescent (Davis 2017). Two inhumations were also found outside the enclosure and contained the remains of two poorly preserved adults in flexed position (Barber et al. 2007). Direct radiocarbon dates on bones from these burials provided dates of 2263±35 BP (Wk-15365; 397–205 cal BCE; burial 1, Skeleton 1486) and 2235±35 BP (Wk-15366, 391–198 cal BCE; burial 2; Skeleton 1552). Sample I16405 (male) derives from the petrous of Skeleton 1486 (2008.14H/4.1).

Source of sample: Jody Deacon, National Museum of Wales

Source of entry: Claire-Elise Fischer

References:

Barber, A. J., Cox, S. and Hancocks, A. 2006. A Late Iron Age and Roman farmstead at RAF St Athan, Vale of Glamorgan. Evaluation and excavation 2002–03. *Archaeologia Cambrensis* 155: 49–115.

Davis, O. 2017. Iron Age burial in Wales: patterns, practices and problems. *Oxford Journal of Archaeology* 37(1): 1–49.

St. Fagan's, Glamorgan, Wales, UK

In 1900, labourers installing a water pipe for Cardiff Water on land around Newhouse Farm on behalf of Lord Windsor uncovered a slab of Radyr red sandstone. Beneath the stone slab they discovered the remains of two individuals, one young adult male and a subadult individual of indeterminate sex accompanied by a Beaker pot. Both skeletons were subject to osteological assessment for The Beaker People Project (Parker Pearson et al. 2019), which established that the young adult (Sk 152) was likely aged 17–25 years and the subadult (Sk 153) was probably no older than 14–16 years old when they died. The exact arrangement and associations of the burials were unfortunately lost due to “the inevitable scramble for the pot of gold” (Ward 1902: 29) that occurred when the supervisor left the site to report the find. It was assumed that the

grave represented a Beaker period double burial; however, radiocarbon dating of Sk 153 as part of The Beaker People Project produced a Middle Bronze Age date of 3156 ± 28 BP (OxA-V-2271-28; 1500–1322 cal BCE). Therefore, it is likely that Sk 152 was originally buried beneath the slab, accompanied by the Beaker, and Sk 153 represents a later intrusive interment. Sample I5440 (male) was taken from the petrous portion of the temporal bone (SB582A, 01.113 (Juvenile)) of the subadult individual in Sk 153.

Source of Sample: Jody Deacon, National Museum of Wales

Author of Entry: Tom Booth

References:

Parker Pearson, M., Sheridan, A., Jay, M., Chamberlain, A.m Richards, M. and Evans, J. 2019. *The Beaker People: Isotopes, Mobility and Diet in Prehistoric Britain*. Prehistoric Society Research Paper 7. Oxford: Oxbow.

Ward, J. 1902. Prehistoric interments near Cardiff. *Archaeologia Cambrensis* 57: 25–32.

SI Section 2: Genetic clustering and outlier detection

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To prepare our dataset of individuals from Britain for analysis, we divided individuals into four time periods based either on the means of archaeological context ranges, or the means of the 95% calibrated confidence intervals from radiocarbon dating on skeletal elements from the individuals we analysed. Based on the point estimate, we labelled the individual as Mesolithic (before 4000 BCE), Neolithic (4000-2450 BCE), Chalcolithic/EBA (2450-1550 BCE), MBA (1550-1150 BCE), LBA (1150-750 BCE), or IA (750 BCE - 43 CE). We excluded individuals archaeologically possibly associated with Roman burial contexts even if their mean date was in the span of the IA period. For some analyses, we classified individuals geographically (e.g. Scotland vs. Wales vs. England). In the Iron Age we further subdivided into subregions: England.Cornwall_IA, England.EastAnglia_IA, England.Midlands_IA, England.North_IA (excluding Arras culture individuals from East Yorkshire which we treated separately), England.EastYorkshire_IA, England.Southcentral_IA, England.Southeast_IA, England.Southwest_IA, Scotland.Orkney_IA, Scotland.Southeast_IA, Scotland.West_IA, Wales.North_IA, and Wales.South_IA.

For the time-transect in Britain as well as the time-transects outside non-Britain, we carried out *qpAdm* analysis by individual, using a setup for estimating proportions of ancestry (Steppe-related, WHG-related, and EEF-related) optimized to drive down standard errors.

The left source populations are associated to individual IDs as in Supplementary Table 3 and are:

- OldSteppe (n=20) A pool of Yamnaya and Poltavka individuals from Russia
- WHGA (n=18) Western European Hunter-Gatherers from Mesolithic times
- EEF (n=22) Balkan Neolithic farmers with minimal WHG admixture

The right reference outgroups are associated to individual IDs as in Supplementary Table 3 and are:

- Afanasievo (n=19) A group of individuals from the Altai region of Russia and Mongolia with very similar ancestry to OldSteppe
- WHGB (n=41) European Hunter-Gatherers that were genetically very similar to WHGA but with slightly more Eastern European Hunter-Gatherer relatedness and mostly from the Iron Gates region of the Danube river in southeastern Europe
- Turkey_N (n=24) Anatolian Neolithic farmers very similar genetically to EEF
- OldAfrica (n=9) A pool of diverse ancient African individuals with no evidence of recent West Eurasian-related admixture that we use as a deeply divergent outgroup. These individuals are processed using the same enrichment technology as the rest of the left and right populations in *qpAdm*, which we found reduces the rate of model failure likely because it reduces technical biases associated with mixing technologies.

We removed from our analysis dataset individuals that gave a poor fit to this model at $p < 0.01$; had evidence of contamination; were first degree relatives of higher coverage individuals in the dataset; or had low coverage (<30,000 autosomal targeted SNPs covered at least once); this resulted in the “Filter 1” set of individuals in Supplementary Table 5.

For each pool of individuals from a given region and time period, we identified a main subcluster based on visually inspecting a plot of the proportions of EEF, Steppe, and WHG

ancestry. We then iterated over all individuals in the pool, testing for significant evidence of heterogeneity relative to all other individuals in the main cluster not known to be outliers using *qpWave* with the right set (OldSteppe, WHGA, EEF, Steppe). We carried out multiple iterations of this process, each time identifying outliers from the main cluster individuals according to the criterion that the *qpWave* p-value was $p < 0.005$, and stopped when we no longer changed cluster assignments. If outliers were at the extremes of the ancestry distribution for their region and time period, we gave them a suffix that captured this information using a nomenclature like “England.and.Wales_IA_highEEF”. We labeled groups of ancestry-extreme outliers by sorting all individuals within each region and time period based on ancestry proportion. We then identified the individual with the least extreme ancestry that gave a *qpWave* p-value < 0.005 and where all more extreme ancestry samples were also rejected by *qpWave* at $p < 0.05$ (for satisfying this requirement, we disregarding individuals filtered out based on the quality control criteria described above). This index individual and all with more extreme ancestry were labeled with a suffix including the character string “high” or “low” followed by one of the three ancestry types. Individuals not in ancestry extreme tails but with p-values of < 0.005 were labeled with an “_o” suffix. Taken together, this procedure allowed us to identify a main cluster of individuals to represent each time and period, and significant outliers at the extremes of the distributions for their regions and periods. The resulting classification is in Supplementary Table 5 in the “Filter 2” column.

SI Section 3: Proof of a new ancestry source in Britain in the IA

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One possibility for the genetic shift that we see that avoids any substantial movement of people is that we are observing a re-emergence of people of the British Neolithic who mixed with migrants with Steppe ancestry from the continent who arrived in the C/EBA. In this scenario, people with relatively high proportions of ancestry from the British Neolithic continued to live in Britain in the C/EBA, but were invisible or highly underrepresented in the ancient DNA record for about a millennium, perhaps because we have not sampled in the right places in Britain, or because burial customs for people with more heritage from Neolithic people of Britain made them systematically harder to find archaeologically (e.g. more cremation and less burial in marked tombs).

We investigated this possibility using *qpAdm*. Here we present a detailed argument for why a model in which Neolithic people of Britain provide the source of the genetic shift we see in Late Bronze Age and Iron Age England and Wales, can be rejected. We focus our discussion in what follows on comparing England.and.Wales_N, England.and.Wales_C.EBA, and England.and.Wales_IA. Extended Data Figure 1 summarizes these results and also shows qualitatively similar results when we replace England.and.Wales_N with Scotland_N and England.and.Wales_C.EBA with Scotland_C.EBA (this is not surprising as British mainland ancestry shows little geographical variation until the LBA).

We wish to study, using *qpAdm*, the possibility that we can model England.and.Wales_IA using England.and.Wales_C.EBA and England.and.Wales_N as sources.

The set of right outgroup populations we used was:

OldAfrica
OldSteppe
Turkey_N
CzechRepublic.Slovakia.Germany_3800.to.2700BP
Netherlands_C.EBA
Poland_Globular_Amphora
Spain.Portugal_4425.to.3800BP
CzechRepublic.Slovakia.Germany_4465.to.3800.BP
Sardinia_4100.to.2700BP, Sardinia_8100.to.4100BP
Spain.Portugal_6500.to.4425BP

The modeling failed at $P < 10^{-12}$.

We wanted to understand intuitively why the statistics used in *qpAdm* are finding that British sources for the shift are essentially impossible.

There is a simple argument using f_4 -statistics that shows that modeling southern Britons from the Late Bronze Age and afterward as a mixture of individuals from the C/EBA and Neolithic is infeasible. Consider an idealized population:

$$P = \alpha(\text{England.and.Wales_C.EBA}) + (1-\alpha)(\text{England.Wales_N})$$

If P is a good model for England.and.Wales_IA we should have

$$f_4(\text{England.and.Wales_IA}, P; R1, R2) \approx 0$$

for any pair of populations R1, R2. This is the same basic idea as used by *qpAdm* but simpler and easier to understand.

Extended Data Figure 1B shows Z-scores as we vary α . We define:

Z1 as the Z-score for $f_4(\text{England.and.Wales_IA}, P; \text{OldAfrica}, \text{OldSteppe})$

Z2 as the Z-score for $f_4(\text{England.and.Wales_IA}, P; \text{Balkan_N}, \text{Sardinian_8100.to.4100BP})$

Our analysis in the main text shows that α should be close to 0.85 as is confirmed here by Z2. Intuitively, $\alpha=0.85$ provides England.and.Wales_IA with its empirically observed proportion of Steppe ancestry. We show the scores of $0.7 < \alpha < 1$, as for other values $Z1 < -10$. Strikingly, across the range of α values that are remotely feasible for Z1, we always observe $Z2 < -6$. This excludes a scenario in which the increase in ancestry by the Iron Age is caused entirely be a resurgence of ancestry from early British farmers.

We note that we also obtain poor or extremely poor *qpAdm* fits if we replace in the right outgroup set:

Balkan_N with Austria.Hungary.Slovenia_8100.to.6500BP

Sardinia_8100.to.4100BP with Sardinia 4100.to.2700BP

In conclusion, the new migrants coming into southern Britain contributed a large proportion of the ancestry by the Iron Age harboured a distinctive type of southern European ancestry not present in either Early Neolithic British farmers, or in C/EBA Britons.

SI Section 4: Genetic relationship between The Amesbury Archer and The Companion

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In Supplementary Table 6 we list the 48 multi-person families each of which includes at least one newly reported individuals, and which altogether comprise 123 individuals. In this section, we discuss the relationship of two notable individuals.

The Amesbury Archer (I14200) and The Companion (I2565) have been hypothesized to be close relatives based on the presence of an uncommon non-metric trait (calcaneonavicular coalition) in the feet of both individuals (Fitzpatrick 2013). We therefore sought to use genetic data to measure their degree of relationship. Given the relatively poor DNA preservation as compared to other individuals from Amesbury Down, we generated and merged data from 8 libraries from the Archer to give a coverage of 165,744 SNPs on chromosomes 1-22; the comparative data from the Companion consisted of 58,524 SNPs, and the overlap was 14,090 SNPs. We computed allelic mismatch rate between both individuals and obtained a value of 0.256. Following an approach described previously (Kennet 2017; Olalde 2019), we estimated the relatedness coefficient using a normalization value of 0.2615 from unrelated pairs of England Bronze Age individuals. The relatedness coefficient is 0.0405 (95% confidence interval of -0.0161 to 0.0971), which completely rules out 1st-degree (expected coefficient of 0.5) or 2nd-degree relationships (expected coefficient of 0.25), although more distant relationships are possible.

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SI Section 5: Isotope analysis

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To investigate the geographical origins of individuals identified as genetic outliers from sites in Great Britain (Cliffs End Farm; Margetts Pit) and the Netherlands (Hoogkarspel, projects Houterpolder-West and Markerwaardweg; Westwoud, project Binnenijzend), we compiled published isotopic data for the individuals we analysed and also carried out additional measurements of isotopes, motivated by previous isotopic analysis ($^{87}\text{Sr}/^{86}\text{Sr}$, $\delta^{13}\text{C}$, $\delta^{18}\text{O}$) of human tooth enamel that identified mobility within the British Isles during the Bronze Age (Evans, Stoodley and Chenery 2006) and demonstrated that Arras culture chariot graves in Britain do not represent individuals originating on the continent (Jay 2013). Published isotope data on prehistoric populations from the Netherlands are scarce, but provide convincing evidence for (long-distance) movement (Kootker 2018; Brusgaard 2019).

Here we present new isotope data for a total of six individuals, of which four were identified as genetic outliers. In addition, we discuss previously published strontium and oxygen results for a Cliffs End Farm individual outlier I14861 (Millard 2014). The ancient DNA results presented in this paper also identified another individual from Cliffs End Farm with significantly elevated EFF ancestry (I14865) but unfortunately, no teeth were available for isotope analysis.

Generation of isotopic data

Strontium and carbonate oxygen analysis of tooth enamel from the Margetts Pit individual (I13716) was performed at the British Geological Survey laboratory (Keyworth, UK). Potential surface contaminants were removed by abrasion with a tungsten carbide dental bur to a depth of >100 microns. An enamel sample was cut from the tooth using a flexible diamond-edged rotary dental saw and surfaces were mechanically cleaned with a diamond bur to remove adhering dentine. The resulting sample was transferred to a clean (class 100, laminar flow) working area for further preparation. The sample was first cleaned ultrasonically in high purity H_2O to remove dust, rinsed twice, and then soaked for 1 hour at 60° C, rinsed twice, then dried and weighed into pre-cleaned Teflon beakers. The sample was mixed with ^{84}Sr tracer solution and dissolved in Teflon distilled 16M HNO_3 and converted to chloride form using 6M HCl . Strontium was collected using Eichrom AG50 X8 resin columns. Strontium was loaded onto a single Re Filament following established methods (Birck 1986) and the isotope composition and strontium concentrations were determined by Thermal Ionisation Mass spectroscopy (TIMS) using a Thermo Triton multi-collector mass spectrometer. The international standard for $^{87}\text{Sr}/^{86}\text{Sr}$, NBS987 gave a value of 0.710262 ± 0.000018 (2SD, $n=10$) during the analysis of these samples. Data are corrected to an accepted value for this standard of 0.710250.

Approximately 5 mg of the enamel were crushed to a powder using an agate pestle and mortar. About 3 mg of the powdered enamel was loaded into a glass vial and sealed with a septa. The vials were then transferred to a hot block at 90°C on the GV Multiprep system. The vials were evacuated and 4 drops of anhydrous phosphoric acid added. The resultant CO_2 was collected cryogenically for 15 minutes and transferred to a GV IsoPrime dual inlet mass spectrometer for isotope measurement.

$\delta^{18}\text{O}$ is reported per mil (‰) and normalized to the PDB scale using a within-run calcite laboratory standard (KCM) calibrated against NBS-19 IAEA reference material. Analytical reproducibility for this run of laboratory standard calcite (KCM) is $\pm 0.02\text{‰}$ (1σ , $n=15$) for $\delta^{13}\text{C}_{\text{PDB}}$ and $\pm 0.04\text{‰}$ (1σ , $n=15$) for $\delta^{18}\text{O}_{\text{SMOW (c)}}$. External reproducibility of the enamel data $\delta^{18}\text{O}_{\text{SMOW (c)}}$ based on the analysis of duplicate sample pairs gives ± 0.06 (1SD, $n=3$).

For Cliffs End Farm Burial 3673 (I14861), strontium and oxygen isotope analysis of tooth enamel were published in 2014 (Millard 2014) and we reassess those data here.

Strontium and carbonate oxygen analysis of enamel from Hoogkarspel and Westwoud was performed at the Vrije Universiteit Amsterdam. Dental enamel was sampled using previously published protocols (Kootker and Mbeki 2016). About 2 mg and 0.3 mg were sampled for Sr and O isotope analysis respectively. A detailed description of the Sr column extraction and the sample loading procedures is given in Kootker and Mbeki 2016. The strontium isotope ratios were measured with a Thermo Fisher Scientific (Waltham, MA, USA) Triton Plus thermal ionization mass spectrometer. The ratios were determined using a static routine and were corrected for mass fractionation. The intra-run NBS987 gave a mean $^{87}\text{Sr}/^{86}\text{Sr}$ of 0.710242 ± 0.000013 during the course of the study (2σ , $n=9$). The sample measurements were normalized using a standard bracketing method with the accepted value of $^{87}\text{Sr}/^{86}\text{Sr} = 0.710240$. The total procedural blanks ($n=2$) contained <26 pg strontium. All samples are measured to an internal precision of better than ± 0.000014 (2σ).

The $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ values were measured using a Thermo Finnigan GasBench II preparation device interfaced with a Thermo Finnigan Delta+ mass spectrometer. The data were normalized to the Vienna Pee Dee Belemnite (VPDB) scale using an in-house carbonate reference material (VICS) calibrated against NBS19 and LSVEC certified reference materials. The international control standard IAEA-CO1 was used to check instrument performance (average -2.38‰ , $n = 18$). The reproducibility of IAEA-CO1 during the analytical session was $\pm 0.12\text{‰}$ (1σ).

Value conversions

For interpretational purposes, $\delta^{18}\text{O}_{\text{PDB}}$ values were recalculated relative to Vienna Standard Mean Ocean Water (VSMOW), Phosphate (P), and drinking water (DW) using equations 1, 2, and 3 respectively (Coplen 1988; Daux 2008; Chenery 2012):

$$\delta^{18}\text{O}_{\text{VSMOW}} = 1.03091 * \delta^{18}\text{O}_{\text{PDB}} + 30.91 \quad (\text{eq. 1})$$

$$\delta^{18}\text{O}_{\text{P}} = 1.0322 * \delta^{18}\text{O}_{\text{VSMOW}} - 9.6849 \quad (\text{eq. 2})$$

$$\delta^{18}\text{O}_{\text{DW}} = 1.54 * \delta^{18}\text{O}_{\text{P}} - 33.72 \quad (\text{eq. 3})$$

Cliffs End Farm (I14861) oxygen phosphate values were converted to drinking water values using equation 3 (for full details see: Millard 2014).

Margetts Pit (I13716)

Strontium, oxygen and carbon isotope analysis was conducted on tooth enamel carbonate from an M2 (27) from Margetts Pit individual I13716. The second molar mineralizes between 3–8 years of age so corresponding isotope values provide information about childhood origins (Al Qahtani 2010). The results are presented in Supplementary Table 10. The $^{87}\text{Sr}/^{86}\text{Sr}$ of I13716

suggest the individual likely spent their childhood in an area of chalk geology (chalk median $^{87}\text{Sr}/^{86}\text{Sr} = 0.7082$) and falls within the range of values reported for southeast Britain (Evans 2018). The equivalent drinking water oxygen value (-7.9‰) for I13716 is within the range of $\delta^{18}\text{O}$ values reported for modern freshwater sources across the UK (Darling 2003) and is similar to oxygen values for archaeological individuals from southern Britain (Evans et al. 2006; Evans 2012). While the Sr-O data for I13716 could indicate the individual lived locally, other areas of continental Europe, including parts of France (Willmes 2018), could accommodate these values and thus cannot be excluded as a potential point of origin.

Supplementary Table 10: Strontium, carbon and oxygen measurements in tooth enamel from I13716

Sample	Tooth (FDI)	Sr ppm	$^{87}\text{Sr}/^{86}\text{Sr}$	$\delta^{13}\text{C}_{\text{carb}}(\text{‰})$ PDB	$\delta^{18}\text{O}_{\text{carb}}(\text{‰})$ SMOW	$\delta^{18}\text{O}_{\text{DW}}(\text{‰})$ PDB
I13716 (F)	27	135.5	0.708304	-12.86	25.62	-7.9

Cliffs End Farm (I14861)

For Burial 3673 (I14861), strontium and oxygen isotope analysis of tooth enamel phosphate was published previously (Millard 2014). Two teeth were analysed: second premolar (P2, position not reported) and third molar (M3, position not reported). Isotope signals therefore represent average dietary intake and residential origins at approximately 2–6 years of age and 8–15 years respectively (Al Qahtani 2010).

As previously proposed, the combined Sr-O data suggest a non-local origin for this individual (Millard 2014). The $^{87}\text{Sr}/^{86}\text{Sr}$ of I14861 (Supplementary Table 11) exceed the upper limit of expected Sr biosphere values for the immediate locale (Evans 2018) but are still within local range. The Sr values demonstrate limited movement between the two ages captured by isotope sampling. Modern oxygen water values for the UK are reported to be between -9‰ to -4‰ (Darling 2003), therefore this individual spent their childhood outside of Britain (Millard 2014). $\delta^{18}\text{O}$ phosphate values are comparable to those obtained for many skeletons excavated across continental Europe (McGlynn 2007), including those of a possible Alpine origin (e.g. northern Alps) (Oelze 2012). While a ‘Scandinavian’ origin for I14861 was previously suggested (Millard 2014)⁵ and cannot be excluded, we propose a continental/Alpine origin would be more consistent with the genetic findings of this study (i.e. high EEF ancestry).

Supplementary Table 11: Strontium and oxygen measurements in tooth enamel from I14861

(using data from Millard 2014)

Sample	Tooth	$^{87}\text{Sr}/^{86}\text{Sr} \pm 2\text{SE}$	$\delta^{18}\text{O}_{\text{phosphate}}(\text{‰})$ VSMOW	$\delta^{18}\text{O}_{\text{DW}}(\text{‰})$ VSMOW
I14861 (M)	P2	0.710158 ± 6	14.23	-11.81
	M3	0.710108 ± 7	13.98	-12.19

Hoogkarspel Houterpolder-West (I12081) and Markerwaardweg (I10283)

The Sr-C-O isotope analyses were conducted on a canine (33) and a second molar (27) for females I12081 and I12083, corresponding to the dietary intake of Sr-C-O between 4 months - 6 years and circa 3-8 years of age respectively (Supplementary Table 12). No enamel was available from I12081 for additional C-O isotope analysis. The $^{87}\text{Sr}/^{86}\text{Sr}$ of I12081 is too low compared to the expected local bioavailable Sr signature (conservative definition 0.7088 - 0.709 (Kootker 2016)). In contrast, I12081 exhibits a $^{87}\text{Sr}/^{86}\text{Sr}$ ratio more radiogenic than the expected local Sr signature. Both Sr ratios are indicative of a non-local or regional origin of the individuals. In fact, Sr ratios as low as 0.708471 may not even be representative of a “Dutch” origin. The Sr-O-C isotope data of I12083 are inconsistent with an origin in Holocene sediments from the Netherlands (coastal and central river regions), but do occur in regions that consist of Pleistocene sediments (cover sands, boulder clay, ice pushed ridges).

Supplementary Table 12: Strontium, carbon and oxygen measurements in tooth enamel from I12081 and I12083.

Sample	Tooth (FDI)	$^{87}\text{Sr}/^{86}\text{Sr} \pm 2\text{SE}$	$\delta^{13}\text{C}_{\text{PDB}} (\text{‰}) \pm 1\text{SD}$	$\delta^{18}\text{O}_{\text{PDB}} (\text{‰}) \pm 1\text{SD}$
I12081 (F)	33	0.708471 ± 11	-	-
I12083 (F)	27	0.709837 ± 12	-15.16 ± 0.04	-6.01 ± 0.06

Westwoud, project Binnenijzend (I11971, I11972, and I11973)

Three individuals from Westwoud were analysed, but only one (I11973) was identified as a genetic outlier (Supplementary Table 13). First molars (46) were sampled from individuals I11971 and I11973, and a second molar (47) was selected from I11972. These dental elements mineralize and mature between birth and circa 3 years (M1) and 3 to 8 years of age (M2). I11971 and I11972 exhibit Sr-C-O isotope ratios that are consistent with the expected local isotope signatures. Thus, they do not provide evidence for a non-local origin. These data are consistent with the aDNA data. The Sr-O data of genetic outlier I11973, however, is not compatible with an origin in the Netherlands, nor Great Britain (Kootker, van Lanen 2016; Evans 2012). However, certain parts of France may accommodate the origin of this female such as Brittany (Willmes 2018).

Supplementary Table 13: Strontium, carbon and oxygen measurements in tooth enamel from I11971, I11972 and I11973

Sample	Tooth (FDI)	$^{87}\text{Sr}/^{86}\text{Sr} \pm 2\text{SE}$	$\delta^{13}\text{C}_{\text{PDB}} (\text{‰}) \pm 1\text{SD}$	$\delta^{18}\text{O}_{\text{PDB}} (\text{‰}) \pm 1\text{SD}$
I11971(F)	46	0.708775 ± 10	-14.94 ± 0.05	-5.84 ± 0.05
I11972 (M)	47	0.708998 ± 10	-14.40 ± 0.08	-5.56 ± 0.08
I11973 (F)	46	0.714665 ± 10	-15.64 ± 0.04	-6.32 ± 0.06

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SI Section 6: Relationship of the new source of ancestry to continental Europeans

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Searching for populations that fit as a source for the new ancestry in IA southern Britain

It seems overwhelmingly probable that the genetic shift in southern Britain between the Early Bronze Age and the Iron Age was caused by immigration from the European mainland. In this section we attempt to obtain insight into the likely sources.

We first ran *qpAdm* with the following set of populations in the right outgroups:

OldAfrica
CzechRepublic.Slovakia.Germany_3800.to.2700BP
CzechRepublic.Slovakia.Germany_4465.to.3800.BP
Netherlands_C.EBA
Poland_Globular_Amphora
Sardinia_4100.to.2700BP
Sardinia_8100.to.4100BP
Spain.Portugal_4425.to.3800BP
Spain.Portugal_6500.to.4425BP
OldSteppe
Turkey_N

We took *England.Wales_IA* as the target and as sources we tried 65 populations along with *England.Wales_C.EBA* (Supplementary Table 14). All X were mainland European groups except for a pool of two outliers from Cliffs End and a pool of two outliers from Margetts Pit. All of these four individuals dated to the MBA and LBA and have significantly elevated EEf ancestry compared to their period average (Figure 3).

Supplementary Table 14: Testing 65 sources and *England.Wales_C.EBA* to model *England.Wales_IA*

Source	P-value	Prop. from source	S.E.
France_Occitanie_IA2_highEEF.SG	0.853614	0.258	0.017
France_GrandEst_EBA_o.SG	0.818124	0.565	0.083
Netherlands_MBA_highEEF	0.676168	1.011	0.111
Czech_LBA_Knoviz_lowEEF	0.622475	2.633	0.679
Germany_Lech_MBA	0.501663	0.599	0.067
Netherlands_EIA	0.490547	2.234	1.924
France_Occitanie_IA2_highWHG.SG	0.389790	0.335	0.041
France_Occitanie_IA2_lowSteppe.SG	0.334664	0.365	0.026
Spain_Greek_oLocal	0.257966	0.38	0.021
France_Occitanie_IA2.SG	0.245259	0.533	0.054
Spain_IA_Tartessian	0.157734	0.237	0.012
France_GrandEst_IA1.SG	0.116646	0.489	0.037
France_GrandEst_IA2	0.090877	0.685	0.033
Slovakia_IA_Vekerzug_lowEEF	0.084691	1.326	0.157
England_MLBA_MargettsPitt	0.074915	0.436	0.029
England_MLBA_CliffsEnd	0.072629	0.589	0.061
Czech_MBA_Tumulus	0.069266	0.738	0.074
Czech_MBA_Tumulus_lowSteppe	0.055019	0.433	0.028
Spain_IA_Celt	0.054070	0.346	0.018
France_SouthEast_IA2_lowSteppe	0.050087	0.376	0.017
Hungary_IA_LaTene_lowEEF	0.038729	0.940	0.065

Italy_Sardinia_BA_Nuragic_highSteppe	0.033847	0.143	0.005
France_GrandEst_EBA.SG	0.033195	0.39	0.047
Germany_Tollense_BA.SG	0.024693	0.584	0.061
Czech_IA_LaTene_lowEEF	0.016807	2.931	0.586
France_GrandEst_LBA.SG	0.008596	0.325	0.034
Netherlands_MBA	0.007654	-4.621	3.58
Hungary_IA_Scythian_lowEEF.SG	0.007265	0.593	0.043
Italy_Sardinia_BA_Nuragic	0.004811	0.14	0.004
Czech_IA_Hallstatt	0.004216	0.739	0.054
Germany_Tollense_BA_lowEEF.SG	0.002457	0.697	0.061
Netherlands_LBA	0.001851	-2.482	1.48
Portugal_MBA.SG	0.001850	0.202	0.009
Gibraltar_EBA	0.001232	0.219	0.012
Italy_Sardinia_IA_Punic_2	0.000944	0.161	0.006
Czech_LBA_Knoviz_lowSteppe	0.000729	0.55	0.036
France_GrandEst_IA2.SG	0.000497	0.517	0.033
Spain_BA.SG	0.000436	0.233	0.01
Spain_IA	0.000131	0.274	0.01
Spain_LBA	0.000088	0.276	0.015
Spain_MBA	0.000071	0.238	0.01
France_GrandEst_LBA_highEEF	0.000038	0.161	0.007
France_GrandEst_IA1_highEEF.SG	0.000017	0.382	0.031
Hungary_EIA_Prescythian_Mezocsat_lowEEF	0.000008	0.648	0.06
Austria_IA_LaTene	0	0.404	0.023
Croatia_EIA	0	0.33	0.017
Croatia_MBA	0	0.356	0.024
Czech_IA_LaTene	0	0.48	0.016
Czech_LBA_Knoviz	0	0.541	0.02
Czech_LBA_Knoviz_highEEF	0	0.362	0.022
England.and.Wales_N	0	0.154	0.005
Germany_Lech_EBA_highEEF	0	0.352	0.018
Greece_BA_Mycenaean	0	0.182	0.011
Hungary_EIA_Prescythian_Mezocsat	0	0.424	0.029
Hungary_IA_LaTene	0	0.373	0.015
Hungary_MBA_Vatya.SG	0	0.331	0.02
Italy_IA_Republic_oEasternMediterranean.SG	0	0.217	0.012
Italy_IA_Republic.SG	0	0.247	0.009
Italy_Sicily_LBA	0	0.173	0.007
Latvia_BA	0	-1.669	0.263
Scotland_N	0	0.158	0.005
Slovakia_IA_Vekerzug	0	0.521	0.036
Slovakia_IA_Vekerzug_highEEF	0	0.313	0.017
Slovenia_EIA	0	0.432	0.026
Spain_EBA	0	0.227	0.007

Note: We rank-order by the P-value of the *qpAdm* fit; P>0.05 was taken forward for further analysis.

We wished to reduce the length of this list and therefore carried out a follow-on analysis where for each of the candidate source populations for the ancestry shift with P>0.05, we tested 69 populations from Europe, North Africa or the Levant dating to older than 1000 BCE, in each case carrying out a *qpAdm* analysis in which the basic set of 11 right outgroup populations was supplemented with the additional population. We performed a total of 1311 = 19x69 *qpAdm* runs after merging the Margetts Pit and Cliffs End individuals into a group we called “MargettsPit_CliffsEnd_MLBA” (n=4) that increased power to study the possible

proximate source for the ancestry shift in LBA and IA Britain. For each of the 19, we recorded the lowest P-value (P_{lowest}) and applied a conservative Bonferroni-style correction for 69 hypotheses tested: $P_{\text{corrected}} = 1 - (1 - P_{\text{lowest}})^{69}$. Ten populations have $P_{\text{corrected}} > 0.05$ (Supplementary Table 15).

Supplementary Table 15: Testing 19 sources and *England.Wales_C.EBA* to model *England.Wales_IA*

Tested source	Population contributing to lowest P	P_{lowest}	$P_{\text{corrected}}$
France_GrandEst_EBA_o.SG	Serbia_IronGates_Mesolithic_o	0.077631	1
France_Occitanie_IA2_highEEF.SG	Bulgaria_BeliBreyag_EBA	0.067049	1
Germany_Lech_MBA	Turkey_C	0.047104	1
France_Occitanie_IA2_highWHG.SG	Syria_Ebla_EMBA	0.030872	1
France_GrandEst_IA1.SG	Scotland_N	0.019276	1
France_Occitanie_IA2.SG	Ukraine_Mesolithic	0.014515	1
France_Occitanie_IA2_lowSteppe.SG	Spain_HG	0.005959	0.411171
Spain_IA_Tartessian	Croatia_MBA	0.005198	0.358662
France_GrandEst_IA2	Ukraine_Mesolithic	0.001951	0.134619
MargettsPit_CliffsEnd_MLBA	Germany_EN_LBK	0.001788	0.123372
France_SouthEast_IA2_lowSteppe	Bulgaria_MalakPreslavets_N_oLowEEF	0.000579	0.039951
France_GrandEst_EBA.SG	Russia_HG_Karelia	0.000575	0.039675
Spain_IA_Celt	Latvia_HG	0.000258	0.017802
Germany_Tollense_BA.SG	Latvia_HG	0.000022	0.001518
Czech_MBA_Tumulus_lowSteppe	Latvia_HG	0.000016	0.001104
Italy_Sardinia_BA_Nuragic_highSteppe	Netherlands_MBA	0.000014	0.000966
Spain_Greek_oLocal	Netherlands_MBA	0.00001	0.00069
Czech_MBA_Tumulus	Ukraine_N	0.000004	0.000276
Hungary_IA_LaTene_lowEEF	Ukraine_Mesolithic	0	0

Notes: “Plausibility” is defined as $p > 0.05$ in Supplementary Table 14 and proportions of new ancestry ranging from 0 to 1. The 69 populations added to the right are *Israel_Ashkelon_IA2*, *Italy_Sicily_LBA*, *Italy_Sardinia_BA_Nuragic*, *Israel_Ashkelon_IA1*, *Scotland_MBA*, *Spain_LBA*, *Greece_BA_Mycenaean*, *Spain_MBA*, *Netherlands_MBA*, *Israel_MLBA_o*, *Israel_Ashkelon_LBA*, *Israel_MLBA*, *Gibraltar_EBA*, *Croatia_MBA*, *Turkey_Alalakh_MLBA*, *Spain_EBA*, *Russia_Bolshoy*, *Greece_Minoan_Odigitria*, *Italy_Sicily_EBA*, *Greece_Minoan_Lassithi*, *Syria_Ebla_EMBA*, *Poland_ChopiceVeselaCulture*, *Turkey_TitrisHoyuk_EBA*, *Poland_BellBeaker*, *Jordan_EBA*, *Bulgaria_BeliBreyag_EBA*, *Turkey_Arslantepe_EBA*, *Bulgaria_EBA*, *Lithuania_LN*, *Turkey_EBA*, *Latvia_LN_CordedWare*, *Ukraine_Globular_Amphora*, *Scotland_N*, *Turkey_Ikiztepe*, *Turkey_Arslantepe_LateC*, *Ukraine_Eneolithic*, *Turkey_Ikiztepe_LateC*, *Turkey_CamlibelTarlasi_LateC*, *Ukraine_Eneolithic_Trypillia*, *Romania_C_Bodrogkeresztur*, *Israel_C*, *Latvia_MN_o3*, *Turkey_C*, *Latvia_MN*, *Greece_Peloponnese_N*, *Lithuania_EMN_Narva*, *Bulgaria_C*, *Bulgaria_Varna_C*, *Estonia_EMN_Narva*, *Italy_Sicily_MN*, *Germany_EN_LBK*, *Ukraine_N*, *Turkey_TellKurdu_EC*, *Sweden_Motala_HG*, *Latvia_HG*, *Bulgaria_MalakPreslavets_N_oLowEEF*, *Bulgaria_N*, *Bulgaria_MalakPreslavets_N_oHighEEF*, *Bulgaria_MalakPreslavets_N*, *Russia_HG_Karelia*, *Serbia_IronGates_Mesolithic_o*, *Jordan_PPNC*, *Serbia_IronGates_Mesolithic*, *Romania_IronGates_Mesolithic*, *Ukraine_Mesolithic*, *Jordan_PPNB*, *Israel_Natufian*, *Spain_HG* and *Morocco_Iberomaurusian*.

We then further restricted to populations with standard errors for their ancestry estimates of < 0.06 allowing more precise inferences; the inferred proportion of ancestry from the new source ranges from 23.7% to 68.5% (Table 2 and Supplementary Table 14).

The only fitting population in Table 2 that lived at roughly the correct time to be the source for the new ancestry in *England.Wales_IA* is the pool of Margetts Pit and Cliffs End individuals, for which the inferred proportion is $49.4 \pm 3.0\%$. As this population is sampled from the doorstep of Britain itself (Kent), it does not provide information about the geographic origin on the Continent even if it is the correct proximate source.

Of the continental source we populations tested, only 1/5th are from France (13 of 63; Supplementary Table 14). However, 6/7th of the fitting populations are (6 of 7). These are of course not the true source populations as they lived half a millennium or in some cases up to a millennium after the migration events we focus on in here, but it is plausible they descend from earlier M-LBA populations (this could occur, for example, if as in Britain itself, reduction in movement of people in the IA meant that later groups in regions of the continent descended directly from earlier groups). Our sampling of M-LBA groups from France is extremely sparse, and if we wish to better understand the movements between the continent and Britain responsible for the patterns we document in this study, it is important to fill in this temporal and spatial gap in ancient DNA sampling (Figure 1).

(b) Searching for continental populations most closely related to Margetts Pit and Cliffs End

We wanted to look harder at the genetic origins of the Margetts Pit and Cliffs End samples. The ancestry of these two groups, both found in Kent in far southeastern Britain at the closest point to the European continent, are similar, although the 95% confidence intervals of the radiocarbon dates of the two Margetts Pit samples (1391-1129 calBCE and 1214-1052 calBCE) and the two Cliffs End samples (967-811 calBCE and 912-808 calBCE) are non-overlapping by a century or more, so the origin need not be the same. Here, we continue to group all four into a cluster “MargettsPit_CliffsEnd_MLBA” to increase statistical power assuming a common origin.

We carried out the same *qpAdm* analysis as we did to generate Supplementary Table 14, but here replace the target England.and.Wales_IA with MargettsPit_CliffsEnd_MLBA. We restricted to all sources that fit with $P > 0.05$ and whose mean date was > 450 BCE, and tested using *qpWave* and the same set of 11 right outgroup populations whether the sources were genetically indistinguishable from MargettsPit_CliffsEnd_MLBA (that is, whether they fit as 100% sources for it). Supplementary Table 16 shows the five populations that fit. Four of these 5 have high standard errors for the mixing coefficients, consistent with their generally low sample sizes. The Knoviz population, however, is interesting, and has much tighter standard errors. This population is a Central European Urnfield group and distinct genetically from Czech EBA.

Supplementary Table 16: Five populations indistinguishable from MargettsPit_CliffsEnd_MLBA

Population information			qpAdm			qpWave
Source	N	Date	P-value	Proportion	S.E.	P-value
Czech_LBA_Knoviz	18	1037 BCE	0.21	1.084	0.062	0.17
France_GrandEst_EBA.SG	1	1838 BCE	0.07	0.803	0.120	0.05
Germany_Lech_MBA	3	1611 BCE	0.88	1.221	0.152	0.66
Germany_Tollense_BA.SG	4	1250 BCE	0.12	1.216	0.154	0.07
France_GrandEst_EBA_o.SG	1	1650 BCE	0.87	1.305	0.212	0.56

These results do not prove that Czech_LBA_Knoviz is the continental European origin of the Margetts Pit and Cliffs End population, especially as the M-LBA in France is so far poorly sampled. However, it suggests a link to a shared common expanding population, which cannot explain all of the ancestry convergence across Europe in this time, but may explain some of it.

SI Section 7: Convergence of EEF ancestry across Europe was not due to a single source

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Figure 4A shows convergence of EEF ancestry proportions in time transects across Europe.

To better understand this, we focused on individuals from six countries, only analysing time periods in each country after which Steppe ancestry had arrived. We then divided the resulting individuals from each country into Early and Late, and computed the statistic:

$$f_4(\text{Early population}, \text{Late population}; \text{Mbuti}, X)$$

For X we use Steppe=OldSteppe (n=20), EEF=Germany_EN_LBK (n=69), and WHG=WHGA (n=18), with the associations of individuals to group names as in Supplementary Table 3.

Supplementary Table 17 confirms the systematic ancestry changes over time, including a significant rise in EEF ancestry in the Czech Republic and a significant decline in Iberia.

Supplementary Table 17: Z-score for $f_4(\text{Early}, \text{Late}; \text{Mbuti}, X)$. We highlight significant values at $|Z| > 3$.

	Steppe	EEF	WHG
Czech	-11.9	13.5	-0.3
Netherlands	-0.9	1.9	0.4
Hungary	-1.0	0.8	-7.2
France	1.2	-4.4	-1.6
Iberia	6.4	-8.0	-3.9

We wondered whether the genetic data were consistent with a scenario in which the same population, G, admixed into Southern Britain, Bohemia (present-day Czech Republic), and Iberia. The first two regions have low EEF ancestry in the early period, which admixture with G reduces. Iberia has higher EEF ancestry and admixture with G increases this. We can test this hypothesis. We describe a test for the same G mixing into the Bohemian and Iberian populations. Using *qpWave*, we set on the left *L*:

England.Wales_C.EBA

England.Wales_IA

Czech Early

Czech Late

Iberia Early

Iberia Late

and on the right

OldAfrica

CzechRepublic.Slovakia.Germany_4465.to.3800.BP

Poland_BellBeaker

Sardinia_8100.to.4100BP

Spain.Portugal_3800.to.2700BP

Spain.Portugal_6500.to.4425BP

Under our hypothesis the matrix $M_{(l_1;l_2):(r_1;r_2)} = F_4(l_1; l_2; r_1, r_2)$ where we choose l_i from L , r_j from R , will have rank 3, while for 6 arbitrary populations on the left it will have rank 5. We can test the hypothesis that the rank is 3 using *qpWave* and obtain a p-value of $p=0.0041$. We can conclude that the simple idea of a single population moving into southern Britain, Bohemia and Iberia is unlikely to be the whole truth.

We caution that this may be an over-stringent test, since even a small amount of additional ancestry from another source affecting some regions more than others will affect results. For example, North African admixture has been documented to have contributed ancestry to some Iberian individuals in the Chalcolithic and Bronze Age periods (Olalde 2019). If such admixture contributed in a non-trivial way to the Late Iberian population it would explain the failure of the *qpWave* model while still being consistent with a scenario in which most of the convergence in EEF ancestry proportion between Bohemia and Iberia in this period was due to admixture with the same source population.

Reference

Olalde, I. *et al.* 2019. The genomic history of the Iberian Peninsula over the past 8000 years. *Science* 363: 1230-1234, doi:10.1126/science.aav4040.

SI Section 8: Cases of tension between chronological data and analysis groupings

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After we defined our final set of analysis clusters on July 1 2021, we continued to obtain new radiocarbon dates and archaeological context information all of which is fully up-to-date in Supplementary Tables 1, 3 and 5. For 23 individuals, the changes in dates were sufficient to change the assignments into analysis groupings. This represents a tiny fraction of individuals in our time transects (0.9% of the individuals in Supplementary Table 5), and hence we are confident that re-analysis with these individuals assigned to analysis groupings in new ways would not change our findings. Nevertheless, we list these individuals here.

We first list the eight individuals in Britain with tension between the updated chronological data and analysis groupings.

- Three individuals (I12927, I12931 and I12932) from Cleavelands, Bishop's Cleeve, were analysed as "England.and.Wales_IA", but updated to fully Post-IA date ranges of 50-200 BCE.
- I14550 from Sussex, Brighton, Slonk Hill, was analysed as "England.and.Wales_IA", but updated to an uncertain date range that heavily overlapped the post-IA period at 700 BCE – 900 CE.
- Two individuals (I27384 and I27385) from West Lothian, House of Binns, were analysed as "Scotland_PostIA", but updated to mean dates within our cutoff for the IA although their uncertainty ranges included the post-IA (90 calBCE – 110 calCE and 43 calBCE – 117 calCE respectively).
- I16504 from East Lothian, Broxmouth, was analysed as "Scotland_PostIA", but updated to a mean date within our cutoff for the Iron Age although its uncertainty range also included the post-IA: 42 calBCE – 116 calCE.
- I2656 from Longniddry, Grainfoot, was analysed as "Scotland_MBA", but updated to a date within our cutoff for the LBA although its uncertainty range overlapped the MBA: 1283-940 calBCE.

We next list the 15 individuals outside Britain with tension between the updated chronological data and analysis groupings.

- Individual I15028 from Morbihan, Quiberon, Port Blanc, France, was analysed as France.Switzerland_5700.to.4470BP, but updated to a range of 2437-2147 calBCE that should have placed it in France.Switzerland_4470.to.4100BP.
- Individual I16247 from Meurthe-et-Moselle (54), Martincourt, France, was analysed as France.Switzerland_4100.to.2700BP, but updated to a range of 2840-2473 calBCE that should have placed it in France.Switzerland_4700.to.4470.
- Individual I15027 from Morbihan, Saint-Pierre Quiberon, Port Bara, France, was analysed as France.Switzerland_IA, but updated to a Medieval date of 1228-1285 calCE.
- Individual ALT_4_d from Althausen, Germany, was analysed as CzechRepublic.Slovakia.Germany_4800.to.4465.BP, but updated to a calibrated range of 2573-2356 calBCE that should have placed it in CzechRepublic.Slovakia.Germany_4465.to.3800.BP.

- Two individuals (I24344 and I24345) from Velim-Kosa, Croatia, were analysed as Croatia.Serbia_IA, but updated to uncertainty ranges of 1500-400 BCE, overlapping our cutoff for the IA but with their mean in the earlier period which should have placed them in Croatia.Serbia_3900.to.2700BP.
- Individual I23911 from Smiljan, Croatia, was analysed as Croatia.Serbia_IA, but updated to a calibrated range 891-797 calBCE that should have placed it in Croatia.Serbia_3900.to.2700BP.
- Individual I25523 from Somogy, Kútvölgyi-dűlő, Zamárdi (sites 56 and 89), Kútvölgyi dűlő 56. Lh., Hungary was analysed as Austria.Hungary.Slovenia_IA, but updated to a range 1200-800 BCE that should have placed it in Austria.Hungary.Slovenia_4100.to.2700BP.
- Individuals I18241, I18211, I18213, I18216 and I18245 from Heves county, Füzesabony-Ketőshalo in Hungary; individual I18246 from Heves county, Novaj-Földvár in Hungary; and individual I18239 from Heves county, Sirok-Akasztómály in Hungary, were analysed as Austria.Hungary.Slovenia_IA. Their context date was updated to 900-650 BCE which should have placed them into Austria.Hungary.Slovenia_4100.to.2700BP.