

British DNA: the History and Legends of Origin Compared

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Summary: *In December 2021, a DNA study of British population origins entitled “Large-scale migration into Britain during the Middle to Late Bronze Age” was published in the journal Nature. [1] This would attempt to fill the gaps left by earlier genetic studies, which could not resolve ancient DNA origins within the well-mixed modern population of central and southern England. The new study focused rather on older DNA from archaeological sites. The earlier studies also lacked the resolution to distinguish between Iron Age immigration and later Anglo-Saxon arrivals from the same regions. This article considers how the findings from this and other recent genetic studies may be reconciled with the traditions of origin and such contemporary historical sources of ethnography as are available. These may come via Greek and Roman authors, Welsh and Irish oral history, or the corpus of older ethnography that has grown-up prior to the new science of DNA. The picture that is now emerging from the genes is surprisingly congruent with the oldest historical sources.*

From turn of the millennium, genetic studies of ancestry begun to intrude into the comfortable picture of British prehistory as it has been built-up over the years by the archaeologists and linguists. [2] This had itself been forcibly revised in the second-half of the twentieth century by the advent of radiocarbon and again by tree-ring calibration methods; however the older terminology and classifications for periods of prehistory, with some shuffling of dates continued in parlance. There was a presumption that ethnic origin could be related to the changes of artefacts, pottery and tomb styles, etc, as identified by archaeology; and that changes of culture implied population movements and migrations. The spread of languages then accompanied these assumed migrations of people. The attempts to date such cultures by cross-dating of pottery styles back to the chronology of Egypt, led to more general theories of ‘diffusion’ from the 1930s onwards, such that all cultural advance from Stone Age through Bronze Age to Iron Age came to be thought-of as emanating from Egypt and the near east; the use of bronze therefore must also have been brought west by continental invaders: the so-called ‘beaker people’. The dawn of the British Iron Age was ascribed to a later invasion by continental Celts who brought their language with them and replaced the ‘pre-Celts’. Although the revolution in archaeological dating modified these broad assumptions, it failed to fully penetrate studies of ethnography and linguistics. The new science of genetics finally threw this older picture up in the air and demanded a reassessment of prehistory.

To summarise: in 2015 a report on British DNA ancestry had revealed the regional ancestry within Britain and Northern Ireland [3] This was followed by further surveys and regional DNA maps, culminating in the comprehensive studies of modern regional DNA for Britain and Ireland (2016-19). [4] These studies had indicated that the indigenous *Western Hunter Gatherers* declined or were almost completely replaced by new people, the *Early European Farmers* originating from Anatolia perhaps as early as 4000 BC. The conclusion of the geneticists is that the hunter-gatherers therefore contribute negligibly to the make-up of the later population. From the DNA of Cheddar Man (c.7150 BC) we have a view of these earliest inhabitants after the ice age as dark skinned with blue eyes, although his closest surviving descendant – a teacher from Somerset – did not possess those attributes. However, some geneticists would argue that it is still not possible to identify physical traits: eyes, hair, skin-colour, etc from the genes. (MailOnline 2 March 2018).

From around 2450 BC (or perhaps earlier) the DNA now reveals another population transformation; the earlier Neolithic farmers were almost completely replaced by people of ‘*Steppe ancestry*’ who would go on to comprise 90% of the later population.[5] The geneticists associate this with the arrival in western Europe of the Bell Beaker Culture as recognised by archaeologists, expanding from the east after 3000 BC; and by linguists as speakers of the various Indo-European languages. Within this overview it was possible to identify many regional DNA differences in Britain, which loosely correspond to the pre-Roman tribal boundaries. However, within the well-mixed modern population of central and southeast England the earlier genetic studies could not distinguish finer variations nor any major immigrations after about 1300 BC – the late Bronze Age and early Iron Age. [6]

The long-accepted view of British prehistory from archaeology and linguistics, before the revelations of the genes, had placed the first appearance of farming in Britain and Ireland from around 4000 BC. The arrival of people who planted wheat and barley is contemporary with the building of the earliest dolmens, long barrows and

field walls. A decline in agriculture and regrowth of woodland is noted by some archaeologists in the years before 3000 BC, followed by a gradual recovery. [7] Along with this recovery came a change in monument styles from the long barrows to round barrows, astronomically-aligned passage graves and stone circles. For archaeologists, pottery will always figure prominently and the finds of the bell beaker pottery, replacing earlier forms, is evident from around 2500-2200 BC – a seemingly gradual transition from Neolithic to the Bronze Age. However the change of monuments clearly precedes other cultural changes associated with the beakers. The transition to the use of iron tools and weapons, the ‘Iron Age’, is now placed around 800 BC. This is the era when we first find hill-forts throughout Britain, perhaps an indicator that in earlier times such fortifications were not needed. In older literature the Iron Age was associated with an assumed *invasion* of continental ‘Celts’ who brought with them their languages, ancestral to modern Welsh and Gaelic, replacing the ‘pre-Celts’. This terminology remains in use by linguists although the idea of a Celtic ‘race’ has become moribund. It may be noted that the dates suggested for the DNA, archaeological and linguistic shifts do not conveniently coincide.

The 2021 report in Nature by Patterson and a team of geneticists makes heavy reading for the non-specialist, being replete with the jargon and the abbreviations used by geneticists, which of course it must in order to satisfy peer review. Gone are the familiar classifications of racial groups, such as Celts, Indo-Europeans and ‘Aryans’ that we have to recognize when comparing modern with older studies; to be replaced by new terms and abbreviations such as WHG for ‘western hunter gathers’, etc (*see note below*). One has now also to cope with genetic terms such as ‘alleles’ (alternative forms of a gene at the same site on a chromosome) and ‘haplotypes’ (a group of alleles inherited from a parent) as well as ‘mitochondrial DNA’ (inherited only from the mother within the mitochondria of a cell). With archaeological findings we may at least visit an ancient site, or view an artefact in a museum; with linguistics we may trace a source text; a physicist can repeat the maths. However, with genetics, we have to accept the conclusions of the teams of specialists and their referees. Future investigators are invited to “*develop theories integrating the genetic findings within archaeological frameworks*”. It would seem that only archaeology matters and little or no value is to be placed upon the precious historical sources and the legends that have been preserved by the very people whose DNA they are investigating. The historian will always advise you to stay close to the oldest available sources.

An example of the difficulties that the blizzard of new terminology brings for non-specialists may be seen in the report on the BBC News website, which summarised the main conclusions, boldly stating: “*Scientists have uncovered evidence for a large-scale, prehistoric migration into Britain that may be linked to the spread of Celtic languages*”. However, to quote from the report itself the conclusions are rather more guarded:

Population movements are often a significant driver of cultural change, including in the languages people speak. While periods of intense migration such as the one we infer here do not always result in language shifts...

And later:

Our failure to find evidence of large-scale migration into Britain from continental Europe in the IA [Iron Age] suggests that, if Celtic language spread was driven by large-scale movement of people, it is unlikely to have occurred at this time.

It would seem that one may take to such scientific studies those preconceptions with which you arrive; and go away with whatever you expect to find. The centuries of indoctrination about an Iron Age invasion of ‘Celts’ that we have so long been taught is difficult to rebut; its control is both overt and subliminal in every textbook that we read about British prehistory, whether it be archaeology, ethnography, linguistics or culture. The new DNA study would instead place the likely era of mass migration *earlier*, during the mid to late Bronze Age; a period when we know of other population movements and dislocations within the historically better-documented Mediterranean cultures.

A special note in the 2021 report is meticulous to distinguish the meaning of the term ‘migration’, as employed by archaeologists, from its usage in genetics. The former would like to infer, from a change of artefacts, a rapid ‘invasion’ by a foreign culture bringing the objects along with new people; whereas the geneticist would prefer to see migration as “gene flow”: the longer-term infiltration of genes into a population via generations of inter-marriage and individual or family relocations originating from the same source. Here I shall refer to the former as ‘invasion’ and the latter rather as ‘immigration’. It is also best not to become entrapped by the long-standing archaeologists’ classifications such as: Mesolithic, Neolithic, Bronze Age, Iron Age, as if bronze-users could never make stone tools or that Neolithic farmers could not go hunting in the forests. If a Mesolithic tribesman plants a garden then does he become a farmer? It is both absurd and uninteresting to talk about ‘beaker people’ or the distribution, for example, of Tievebulliagh axes as if artefact styles must have ethnographic significance. Such labels should be applied loosely lest they constrain our understanding of a complex past.

Climate and Sea Levels

Another view of the recent past is available from specialist studies of climate and sea-level variations over this same period. These should not be divorced from the proposed migrations of farmers that occurred while these environmental changes were ongoing. The current consensus view of when Britain physically separated from Europe, following the rise of sea level at the end of the Ice Age, is that the North Sea flooded, around 6500 BC. The separation of Britain from Ireland is usually considered an earlier event; however Mesolithic hunter gatherers, such as *Cheddar Man*, had been in the islands long before the final separation. The climate was at its warmest and most equable during the Atlantic pollen zone between c.5500-3000 BC. When the first farmers arrived, Britain was still heavily forested.

A sharp change from this climate regime to stronger seasonal rhythms then set in between about 3000 BC and 500 BC – the Neolithic and Bronze Age. The Atlantic-Sub-Boreal transition (loosely 3000 BC) corresponds quite well to the era when archaeologists detect a population decline and a hiatus in agriculture; [8] and *a few hundred years later* (c.2450 BC) the DNA evidence now suggests an almost complete replacement of the first farmers of Britain by the immigrants from the east. [9] All of the migrations and evolution of the population suggested by the DNA evidence were taking place during the period for which we have dynasties of kings and historical events from Egypt and the near-east, telling us of famines, wars and migrations. For Britain we have no such datable history before the arrival of the Romans, but they must have experienced the same climate influences as we find in the Mediterranean history. We see the well-attested famines during the First Intermediate Period of Egypt. We find mid Bronze Age displacements within the Mediterranean associated with the so-called Sea Peoples, perhaps triggered by famines in more than one region; and the eighteen-year famine described by Herodotus. [*Herodotus, I, 93-96*] However, the *causes* of these climate shifts is not the primary focus here, other than as the background within which the population changes were ongoing. It will not be possible to fully understand the trigger for the migrations until the various specialist views of the past can be reconciled.

Julius Caesar and the Roman Sources

Here however, I shall focus upon another parallel view of British prehistory that can be extracted from the traditions, legends and historical references. A sound place to begin would be to consult the best and oldest classical historical sources; but by common consent even the best is not as good as we might wish! As a subset we have: *Caesar, Tacitus, Strabo, Polybius, Diodorus Siculus, Ptolemy, Dio Cassius, Plutarch, Pliny, Bede and Nennius*. All of these authors offer us peeks into the people of pre-Roman Britain that fail us when we try to drill deeper into precise geography and dates. The tribal divisions that we find in Ptolemy's geography reflect the situation just prior to the Roman conquest of the first century AD rather than in earlier centuries – much can change in a millennium. We find also, more vague references to islands in the Atlantic within earlier Greek sources, where some interpretation is required. No extant classical author leaves us a history of pre-Roman Britain; rather we have to rely upon mere fragments of *Poseidonius* and *Pytheas* as cited by the later historians.

The sources cited by Caesar in his commentaries on the Gallic war are uncertain, although authorities believe that much of his background ethnography came from the lost histories of Poseidonius. We find overlap with the references by Strabo and Diodorus Siculus, but these too may have drawn on the same earlier writers. It can be difficult when considering Caesar's propaganda, to distinguish his first-hand observations and education, from those he has taken from the historians. He tells us about 'recent' Belgic immigrants who farmed around Kent and the southern coasts but offers no clarity as to how long they had been there.

The tribes further inland, he says, were different; he remarks on the social organisation of tribes "*in the interior*", who claimed "*on the strength of their own oral tradition*" to be aboriginal to the island. These same tribes shared wives (if this be the correct term to use) with fathers and brothers within extended families. [*Gallic Wars V.14*] Frustratingly, we cannot distinguish which tribes he is actually describing or how far north they were, but references by other Roman authors may help us to narrow this down.

Dio Cassius and Herodian

In the later Roman wars against the tribes in the north, before they were called Picts, the emperor Septimus Severus came to Britain and his campaign of AD 208-212 is described by Dio Cassius and Herodian. We are given a description of the social organisation of the *Caledonians* and *Maeatae* that is more informative than from the earlier writers. Dio tells us that they did not farm the land, but lived on their flocks, wild birds and fruit, but, for some reason, they declined to eat the fish. Both Dio and Herodian tell us that they lived naked and unshod, despite the cold, to exhibit their tattoos. Most importantly he says that they "*possess their women in common and in common rear all their offspring*". [*Roman History, LXXXVII, 12*] This may give us another version of the social organisation vaguely mentioned by Caesar.

Most revealing of all is a quote from a Caledonian woman, said to have been made to the Empress Julia Augusta: “*we fulfil the demands of nature in a much better way than do you Roman women, for we consort openly with the best men, whereas you let yourselves be debauched in secret by the vilest*”. [Roman History, LXXXVII, 16] This little snippet is so valuable. It sweeps aside the male-centric viewpoint of ‘wife-sharing’ that we find in the other reports, revealing the women as empowered and equal. The absence of marriage customs explains why we find matrilinear royal inheritance among the later Picts, where succession went to a brother or to sister’s son, in the female line (the father’s royal heritage being unreliable). There were no patriarchal ‘families’ as we might understand them and children were brought up within a communal nursery. We may perchance that, as with modern ‘liberated’ women, they tended to have fewer children.

We also see this free social organisation in the writings of Solinus (around AD 250) who is describing the tribes of the west coast and islands. [Polyhistor 22. 9-12] Although the geography is confused, he describes the king of the Hebrides who has access to many women but may have no wife of his own. He echoes other writers, that no man has a wife and “use their women in common”. [10] Of the mainland, he tells us that most of the barbarians tattooed their bodies with animal designs but it is unclear whether the islanders also did this. It would seem that any tribe that tattooed their skin might be considered Picts, but it is simplistic to assume that all Irish and British tribes who tattooed themselves were ethnically the same people.

We have another glimpse of these tribes during of the later campaign of Theodosius (AD 368-9) when Picts and Scots allied with *Attacotti* (or *Atecotti* in another source) were raiding the Roman province. We may see that these were neither Picts nor Scots from Ireland; the term is being used derogatively in the sense of: natives, savages, ‘Indians’! The historian John Morris, a specialist in the post Roman Dark Ages, accepted the meaning of this name from the Celtic linguists to mean: ‘very-old-ones’, or aborigines. To cite the view of Morris, the Atecotti were aboriginal inhabitants who survived alongside the Picts and who wrote the enigmatic ogham inscriptions; in his view these were: “*the language of the aboriginal people who dwelt in Britain before the coming of the British and before the builders of Brochs and duns...who inscribed a little of their language centuries later, when they were familiar with Pictish memorials and the Irish alphabet.*”. [11] Note that Morris, writing in the 1970s, was still in the pre-radiocarbon mould of an Iron Age invasion by continental Celts who supposedly brought with them their Celtic language.

Some of the southern tribes may have followed their own variant of this communal social organisation. Unfortunately, there is no way to know how far south the customs extended and where the cultural and linguistic boundary should be drawn back into the Iron Age and earlier times. Perhaps one day the geneticists will find a way to determine this transition more precisely. We have a clue from later Scottish history as to how such a change of language and culture might come about. In 565 AD Kenneth Mac Alpin, king of the Scots of Dalriada, inherited the Pictish throne by rightful matrilinear succession from his Pictish mother, thus uniting the two kingdoms. Language change and suppression of the Pictish culture within Medieval Scotland then duly followed. We may envisage that in earlier millennia other invasive southern kings could have gained control of northern tribes in a similar manner via matrilinear succession, resulting in change to patrilinear succession and the retreat of the aboriginal language and culture ever-further northwards. However, pockets of the older culture could have persisted in isolated regions. [12]

The unique British social customs should be of importance for genetic studies but do not seem to have been considered. Scientists in general are unlikely to cite non-scientific historical sources, or to ascribe value to them. The ancestry within communal societies where women could choose their own partners, without the constraints of monogamous ‘marriage’, should show its effect in the genes over the generations. It selects different characteristics for survival and should reveal itself mainly in personality and behaviour. If a foreign conquering overlord and a small band of elite followers begat numerous offspring in preference to the local males, then it becomes another way that immigrant-genes could spread within a population without mass immigration. We should also consider who is doing the choosing? Is it the men or the women? Where women have choice it is likely that they would all prefer the same few alpha-males, leading to a concentration of those genes going forward. By contrast patrilinear marriage leads to larger families and population growth; it allows a wider selection of male genes to pass to the next generation.

Foreign ruling-elites may also impose their own language and customs with little effect on the genes; the Normans brought language change to southern Britain but the Romans did not! Slavery and vassalage was commonplace in the ancient world. The integration of slaves, perhaps through the female line *over many generations*, is another way that foreign genes could enter a population without political change (see ‘Orkney’ here below). We may also assume that both genocide and pandemic were common in the ancient world and could account for the complete replacement of a regional population. Again, this cannot be inferred solely from the chance preservation of DNA in a few archaeological finds.

Lactose Tolerance in the Iron Age

A curiosity arising from the new DNA evidence comes in the findings about the precocious evolution of lactose tolerance within the (southern) British population. The condition is more uncomfortable than fatal. It seems that the gene for assimilating cow's milk evolved a millennium earlier in Britain than in adjacent Europe from which they are considered to have migrated.

In Caesar's commentaries we are told that Britain was densely populated and that most tribes *in the interior* lived on milk and meat; cattle being very numerous. [*Gallic Wars* 5, 12-14] Compare this with his ethnographic comments about the continental Germans of the same era. He describes the tribes of the Hercynian Forest as shunning agriculture in preference for milk, cheese and meat, and supplementing their diet with hunting forays, where they would capture wild elk and auroch in pits. [*Gallic Wars*, VI, 26-27] A century later, Tacitus would still describe the Germans as indolent farmers, preferring to plant a field for corn one year, then clear a new plot the next, due to the abundance of spare land. [*Germania*, 45]

The explanation for the lactose mutation in Britain becomes apparent. Caesar is describing the tribes in the 'interior' of Britain, not those Gauls who had arrived recently from the continent. The transition from hunter-gatherers to farming is usually considered as progress to a higher culture: 'civilisation'; whereas it may better be seen as a *necessity* being the mother of invention. Hunting for meat and gathering fruits, etc requires less labour than planting fields and tending flocks; it can be performed by tribes in balance with nature, whereas farming requires forest clearance, field walls and irrigation, which then need to be defended by kings and armies. Iron Age European tribes still had the option to venture into the virgin forests to take wild animals, whereas in offshore Britain, these natural resources had long been depleted; therefore animals had to be farmed for meat much earlier than on the continent. One cannot drink the milk of wild beasts, but for pastoral farmers it is an incidental source of sustenance. People who did not farm might starve; farmers who did not drink milk might starve, but those who drank it could be lactose intolerant; hence those who possessed the gene for tolerance were preferentially selected. No immigration or culture change needed; if anything it signifies a long period of stability.

Tacitus

A summary of early British ethnography is supplied by Tacitus. [*Agricola*, 11] Although he is primarily concerned with the Flavian conquest of the North, he comments on physical characteristics, noting that the red hair and broad limbs of the Caledonians were similar to the Germans, though he is vague as to which part of the continent he compares. He likens the tanned complexion and curly hair of the recently-conquered *Silures* (South Wales) to some Iberians; and says that the inhabitants of the south coast most closely resembled the Gauls opposite. He finds little difference of language between Britons and Gauls – yet how far inland is he considering? In the *Germania* he states that the language of the Baltic *Aestii* (a tribe in Germanic Suebia who did not speak German) was more like that of the Britons – but again fails to be precise. [*Germania*, 45] He mentions the *Brigantes* (Yorkshire-Lancashire) and describes the most northerly inhabitants collectively as "Caledonian Britons"; so we cannot work out how far north this linguistic and cultural divide was situated prior to Roman interference.

The brief overview left by Tacitus is of immense value as it preserves a snapshot of the population at a period when tribal divisions still constrained movement and inter-marriage. We may still observe these regional differences of physical attributes in the modern British population, if we take care to notice, despite two thousand years of further integration. These variations should be of interest to historical geneticists and cannot be gained solely from archaeology. It is regrettable that DNA analysis cannot yet conclusively identify the physical characteristics of these ancient nations.

Strabo and Diodorus Siculus

An important link between Britain and the near-continent was the ancient religion of the Druids. Caesar alone informs us that the order originated in Britain but from Diodorus Siculus we gain more detail about the Druids' activities in Gaul; they retained their influence there even a century later – until their shrines on Anglesey were burned by Agricola. We may therefore assume that there was a religious pilgrimage route in both directions: with Gaulish students visiting Britain and the Britons attending the annual assembly in the centre of Gaul. Just as Latin would later become the medium for Christian unity, there may have been a need for a common Celtic language through which the Druids could spread their oral wisdom and teachings; and this could explain the continuity of Celtic languages from Gaul to Anglesey and perhaps to Ireland also. The former assumption that Druidism was introduced to Britain (and to Ireland) along with an invasion of Iron Age Celts is no longer tenable; their religious culture was ancient and the newcomers from the east (whether invaders or migrants) became converts. Of particular interest is the Druids' calendar which there is every reason to believe was very ancient, dating back to the astronomically aligned monuments of the Neolithic.[13]

Diodorus Siculus repeats the claim of some British tribes to be aboriginal and says that they still used war chariots in the manner of the Greeks prior to the Trojan War. Strabo gives us fragments of the voyage of Pytheas (c.330 BC) derided by him and his contemporaries, but with geography that we may now endorse. Since his voyage was a circumnavigation of the island, it gives us a glimpse of the coasts but adds no extra detail about the people of the interior. Of Ireland he mentions some cannibal practices and comments on their marriage customs. Overall, other than on the ways of the Druids, these two authors add little to the available ethnic information about the common people or their rulers.

Nennius and Geoffrey of Monmouth

Following the Roman departure from Britain the written sources of pre-Roman history fail completely and our knowledge of post-Roman Britain is little better. Nennius (820 AD) apologetically tells us that he “made a heap” of such history as he could find. In the *Historia Brittonum* attributed to Nennius he tells us that the Britons had set down no written record and indeed we know from the Roman writers that druids and bards were forbidden to write down their knowledge. Such history as had been preserved orally was lost when the Druids were slaughtered and their teachings suppressed. From the Roman author *Pomponius Mela* we hear that the old religion was preserved via illicit meetings in secret forest glades. [*De Chorographia*, III, 2, 18-19] Among these teachings, perhaps a little of the pre-Roman history was orally preserved by the bards, to be written-down for the first time in medieval Wales. We may assume that other Dark Age chroniclers made similar ‘heaps’ of history, all now lost, which were consulted by medieval historians; or that many lost traditions were only ever transmitted orally.

Nennius derived the Britons from the Roman ‘Brutus’ and the eponymous ‘Britto’, one of the Trojans who supposedly founded Rome after the Trojan War. Being driven out, he and his people migrated via Tours in Gaul, to a seemingly uninhabited Britain! We may discount this as Roman-era propaganda to offer Britons the same ancestry as their masters, but it would at least place a colonisation in the late Bronze Age timeframe suggested by the DNA evidence. We should perhaps not rule out that there were colonies of Mediterranean traders that have failed to leave a trace in either DNA or archaeology. This Roman propaganda-invasion also found its way into the more elaborate pseudo-histories of Geoffrey of Monmouth and the Welsh ‘Bruts’ that would attempt to fill the void of pre-Roman history. Another useful ethnic detail that we glean from Nennius is that the Picts too were considered as invaders, whom he says occupied Orkney and the North some 800 years later than the Britons (so say about 300 BC). Bede and others record that they were warriors from ‘Scythia’ (the vast region of modern Russia) and that they sought Irish wives; some Picts perhaps also settled in Ireland.

The Welsh Historical Triads

The historical validity of the Welsh Triads has been greatly disputed and have always had little influence upon the English academic view of British prehistory outside of Wales. This may be partly due to the deeply entrenched barriers of Celtic ethnicity that persist to this day. There are no ancient written sources because the triads were preserved orally; they seem to have been a method of teaching facts to bardic students in easily-remembered clusters of three, with the full details and historical chronology preserved in other ways that have been lost. Some of the elements within the triads reappear in the prose *Mabinogi*. Welsh scholars would suggest that none of the triads are truly ancient; they were created during the void after Roman withdrawal, perhaps as late as the ninth century. Therefore, to imply that the later bardic historian Edward Williams (Iolo Morganwg) may have ‘invented’ the entire third series of triads is not quite the same thing as saying that he invented all the history that they contain; he merely followed what the earlier triad authors had done. [14] However, we may observe that the legends of origin within the triads are remarkably consistent with the picture that we are now given by the geneticists (or at least the genes do not disprove them). So if Iolo and the earlier triad-authors were guilty of inventing history then they did so with remarkable prescience.

In the triads from medieval manuscripts that are generally considered authentic, we find triad 36 which lists the three *gormes* or ‘oppressive invaders’ of Britain.

Three Oppressions That Came To This Island, And Not One Of Them Went Back:

One of them the people of the Cor(y)aniaid, who came here in the time of Caswallawn (=Lludd?) son of Beli: and not one of them went back. And they came from Arabia.

The second Oppression: the Gwyddyl Ffichti. And not one of them went back.

The third Oppression: the Saxons, with Horsa and Hengist as their leaders. [15]

This is the simplest form of the Welsh invasion legends. Although the triads are quite timeless, we may perhaps infer historical sequence in the order that the three facts are presented. The mention of the Saxons betrays the post

Dark Age date of composition. The *Gwyddyl Ffichti* are the 'Irish Picts', sometimes considered to be among the Scotti who crossed to Britain only after the Romans left (the north British Picts being simply *Ffichti*). *Caswallawn* is the Cassivellaunus who opposed Caesar's raids, so this history does not take us back very far. Who the *Coraniaid* may have been is a subject of speculation; as they are listed first we may consider them as certainly earlier than the others? Rachel Bromwich suggested that Triad 51 was a later version that replaced the Coraniaid with the Romans. [16] How do you incorporate a fourth invader into a triad? Answer: drop the oldest one! In the *third series*, Williams elaborated by saying that they were a tribe who settled about the Humber estuary and later united with the Romans and Saxons – but this cannot be authenticated at all. Ptolemy's map shows the *Parisi* tribe east of the Wolds. Archaeologists have long investigated Iron Age fields and burials from East Yorkshire, known as the Arras Culture, dating to the mid-late first-millennium BC. [17]

Welsh scholars lament that Williams, in his supposed forgeries, would incorporate details from authentic manuscripts to make his fictions more believable; some would say that Geoffrey of Monmouth did the same, but it is not so simple. We just don't know how much lost oral history was circulating in early medieval Wales. It is useful to read the extended version (Triad IV) in the third series, which would bring the Coraniaid instead from Asia. Triad V lists tribes who were allowed to settle peacefully: the Caledonians, the Gwyddel (Scots) and Galedin (Gauls). Note that here the Caledonii are distinguished from the Picts and the Scots, but there is no other tradition that would bring them in as immigrants.

Triads I & II of the third series detail the *benevolent tribes* who arrived first and from whom the Welsh claimed descent. First came the *Cymry* themselves, after the Flood; then came the *Lloegrwys* (the Romano-Britons who became absorbed among the English) and thirdly the *Britons* from Llydaw (Brittany or maritime France). All these, the triads claim, were of the same ancient stock and similar language, having migrated from the regions around the Bosphorus and Anatolia in some ancient era. This statement would have to imply that they spoke related forms of Celtic *from the earliest times*, which were mutually intelligible.

By analogy with the spread of the English language, we may see that even a mass invasion from the east coast did not penetrate beyond the highlands of Wales. The genetic study of 2015 determined that the populations of north and south Wales are only distantly related. [18] They were never a unity until the medieval necessity to resist the English. This would again suggest that if the British Celtic language came along with later invaders then they must have colonised Wales *from the west* – i.e. from the sea. Note that nothing in the Welsh tradition claims that the three benevolent tribes were aboriginal in the way that Caesar records, merely that they peacefully occupied an *uninhabited* island. Of course, it may only have been empty in the same sense that Australia and New Zealand were empty before the colonists arrived! The indigenous pastoralists were neither numerous nor strong enough to resist and, like the tribes of the Brazilian rain forests, they were displaced inland. We must look elsewhere to find the tribes who claimed to be the first inhabitants of Britain.

Irish Origins and Invaders

The 2021 genetic study did not encompass Ireland; however, one cannot discuss the early ethnography of Britain without considering the extensive legendary history of Ireland. Irish scholars tend to discuss their prehistory in isolation as if there were little influence from Britain. The Irish also had druids and bards and they too preserved history orally via poetry and prose; but crucially, although some stories have become muddled for the same reasons as the Welsh tales, crucially, it never suffered the four centuries of suppression by the Romans. The Irish view of their origins therefore remained relatively intact, until it too was deformed by Christian conversion and priestly attempts to squeeze the traditional narrative into Biblical doctrine. The summary here will focus principally on ethnic origins and any indicators of chronology contained within the stories.

The origins of the Irish are collected in the Book of Invasions (*Lebor Gabála Éirenn*) recorded via various medieval versions from the eleventh century onward. Nennius also knew of some of the stories in the ninth century. The result is a collection of overlapping sources that lead to varying interpretations. Although scholars typically treat all the invasions as purely mythical, it does at least fill the gap in prehistory that has been totally lost from the equivalent Welsh sources. It allows us to compare that which may be historical and those parts that are even earlier 'mythology'.

The *Lebor Gabála* tells how Ireland was settled successively by six groups of people: the tribe of Cessair, Partholon, and Nemed; these were followed by the Fir Bolg, the Tuatha Dé Danann (Danaans), and lastly the Milesians. Most of the later pseudo-history concerns the Milesians, who are generally regarded as the Gaels; the modern people of Ireland. The first two legendary settlements died out, but from Nemed onward we have details that can perhaps be analysed as history. In the earliest period the land is described as in a formative state; the settlers cleared plains and endured floods. Ireland is described as lying empty and neglected for three hundred years, then again for 30 years until Nemed arrives. Of particular interest should be the struggles of the early settlers

with an apparently indigenous enemy called the *Fomorians*. The name has various translations, among them a ‘giant’ or a pirate. We must consider whether this distorted image recalls a real indigenous population, as they recur repeatedly in later tales. The problem we have is that there is so much imagination in Irish fiction, which disguises where the true history may lie within it all – but this is a general problem when exploring the myths of all nations. We need not dwell here on the details of the various stories, fascinating though they are; and we need not doubt that these too hide much valuable history.

The origin of the settlers is in essence as follows. Some sources would bring them vaguely from ‘Greece’, others from Iberia. The tribe of Nemed, were somehow related to the earlier Partholonians. The Nemedians were ultimately defeated by the Fomorians. Some of the surviving Nemedians from Greece later returned, now calling themselves the *Fir Bolg*. They, in turn, were conquered by the Danaans who drove the Fir Bolg into the west of Ireland and out to the islands; both had their own conflicts with the Fomorians until they were finally defeated by the Danaans in a great battle. The Danaans are also linked back to Greece and we find various interpretations of their origins and how they arrived in Ireland.

Sometime later, much later, there arrived a colony of the *Milesians*, supposedly from Spain (Galicia) and they conquered the Danaans, who, in the later stories would be elevated to the status of ancient gods and figures of myth, along with the Fomorians who become ‘giants’ and distorted fairy-tale caricatures. It is usual to identify the Milesians as the Gaels, who brought with them the Irish language. We have a similar story from Nennius, who records a warrior from Spain, who came with thirty ships, followed, he says, by many more who crossed over gradually. The Britons, he believed, had arrived earlier than these Irish invaders. [*Nennius 13-15*] However, the simple picture that the Milesians completely replaced the earlier inhabitants can be challenged on a number of grounds, not least the preservation of the older legends. Regional DNA variations in Ireland would now also suggest that the descendants of earlier settlers are still there. [19]

Of particular interest must be the Fomorians, who were clearly not considered as Irish, and who were present even when the first settlers arrived. We may view them as indigenous inhabitants who were trying to hold their lands against the intruders. We only have the Irish invaders disparaging view of them. In the *Historia Brittonum* attributed to Nennius, which was written earlier than the Book of Invasions, we are told: “*Bolg and his people held the Isle of Man [Eubonia] and other islands about*”. Again in the Book of Invasions (Ballymote version) we are told that the Fomorians came from the western isles and from Scythia; [20] and that some of the displaced Fir Bolg went to live among them in Britain and in the islands, where they remained identifiable right up to the time of Christian conversion. [21]

As to when we could historically date the various invasions we are offered a clue from archaeology. Irish place name legends attribute the building of the passage graves at Newgrange and its neighbours to a king of the Danaans called *the Dagda*. [22] The construction of the passage graves can be dated via radiocarbon and recent DNA evidence to around 3150 BC and correlates to the period when modern science detects recovery after a real decline in agriculture (see ref 8). This would suggest that the invasion legends are as old as the Neolithic. As for which of the colonists brought the Gaelic language with them remains undetermined. We may also consider that these seaborne colonisations must have left their mark on the west coast of Britain, in Wales, Cornwall and Brittany – but as we have seen, for Britain, the traditions are more sparse. We may note again the remark by Tacitus as to the resemblance of the people of southwest Britain to those of Atlantic Iberia. It is worth consideration that the differences of language between Ireland and Wales may result from the different accents of the earlier people who were absorbed. Perhaps future DNA research will offer more conclusive evidence.

Plutarch and ‘Greeks’

An interesting tale by the Greek author Plutarch offers us another view of the northern and western parts of Britain. In two of his *Moral Essays* he infers that a colony of Greeks had migrated to the Hebridean islands in ancient times. The modern Scot may wonder why Greeks would wish to emigrate from the sun-drenched Aegean to these windswept isles, as most would now prefer to go the other way each year. It seems to have been a religious colony seeking the perceived home of the Greek gods; therefore we may perhaps compare it to a Christian pilgrimage or the annual Muslim Haj.

Plutarch tells us about the explorer *Demetrius*, sent out from Rome during the reign of Emperor Titus to survey the islands west of Britain. [*Obsolescence of Oracles, 419, 18*] He relates that the ancient tomb of Cronus was believed by the locals to lie on an island in that region. His true mission seems to have been to assess the tribal opposition and geography; to evaluate the feasibility of a military campaign on the west coast and a conquest of Ireland. In another essay Plutarch tells us that in ancient times a colony of ‘Greeks’ came west in the train of Heracles and settled in the islands and parts of the mainland. [*The Face on the Moon, 941-942*] It is worthwhile to quote the ethnic information that Plutarch offers:

On the coast of the mainland Greeks dwell... These people consider themselves continentals... and they believe that with the peoples of Cronus there mingled at a later time those who arrived in the train of Heracles and were left behind and that these latter...rekindled the Hellenic spark there which was already being quenched and overcome by the tongue, the laws, and the manners of the barbarians. [Loeb translation]

Whence Plutarch obtained this opinion is uncertain but the narrative suggests that they reached him via Carthaginian sources; it has clear parallels with the Irish Book of Invasions. He says that the Greeks mingled with 'the peoples of Cronus', who may be recognised as the earlier 'barbarian' inhabitants of that region. We are unable to place a date on any of these events, except that the 'Greeks' remained somehow recognizable until such date as Plutarch's source could record them. Any such colony, since it is linked with the legendary figure of Heracles, must recall an ancient time. The Aegean was always a complex ethnic region, with various pre-Greek island races and isolate-languages related to those of Anatolia and Crete. It is likely that Mediterranean tin traders sustained a maritime trading contact with the Atlantic coasts throughout the Bronze Age; and that religious travellers seeking the god Baal-Cronus came along with them. [23]

If direct Greek colonisation does not reveal itself in the British DNA then it may be an indicator that it remembers a very old population movement, perhaps disguised in the Neolithic influx of people of similar 'steppe ancestry' or the even earlier arrival of the first farmers from Anatolia. We would therefore have to regard 'the peoples of Cronus' as a survival of the aboriginal inhabitants: the Mesolithic people, or the Western Hunter Gatherers if you prefer. Small colonies of later traders and pilgrims from the same region would therefore be difficult to distinguish from an older merged-population. There must be greater uncertainty the further back we attempt to unravel the contradictory strands of science versus history and legend.

Hyperboreans

The earliest mention of Hyperboreans 'the people from beyond the North Wind' comes from the poetry of Hesiod dating from 700 BC. By the earliest classical era, the Greeks had forgotten much of their own history from the Bronze Age. They preserved legends about people inhabiting the far north of Europe, beyond the mountains, where the cold wind and snow prevailed. The collective name may therefore encompass many nations at the northern limit of their known world. Due to the prevalence of Latin and Greek in classical education, the interpretation of the Hyperboreans as a purely mythical race dominates to this day, so it is perhaps asking too much of geneticists to find evidence of Hyperboreans in their DNA studies!

In Pinder's Odes, from 500 BC we have poetic references to the visits by Perseus and Heracles to the Hyperboreans, where they witnessed their games and the celebration of the god Apollo, whose religion was especially celebrated in Athens and on the island of Delos. According to Herodotus the Delians knew most about the Hyperboreans. He describes how, since ancient times, they had sent gifts each year to the temple on Delos along with two girls as messengers, escorted by a few men as their bodyguards; and he details their route from Hyperborea via the Adriatic Sea. [*Herodotus IV, 33-4*]

The ancient relationship between Greece and Hyperborea is further confirmed by *Hecataeus of Abdera* (c.320 BC). He offers the extra detail that the Hyperboreans (or at least some of them) lived on an island beyond the Celts. The passage as paraphrased by Diodorus Siculus describes a large island, which could only be either Britain or Ireland. [*Histories, II, 47*] The identification is further validated by the presence there of a 'temple of the spheres' in which the inhabitants would celebrate the sun god (Apollo) with music and hymns as they followed the nineteen-year cycle or 'year of Meton'. This temple has been suggested by various modern commentators to be one of the astronomically aligned stone circles, perhaps Stonehenge or Callanish. Therefore, we may perhaps date the era of this Hyperborean culture via archaeology, by reference to how late the stone circles continued in usage. A key reference of value for ancestry and language study is the statement:

The Hyperboreans also have a language, we are informed, which is peculiar to them...

It is difficult to see this 'peculiar' (i.e. unique) language as British Celtic since the continental Celts were recognised as a cultural unit by even the oldest Historians. Hecataeus has already mentioned them and their language was not considered peculiar. It may record a non-Indo-European language or an isolate that was spoken prior to the Celtic languages. Again, we are not helped by the absence of any written inscriptions from early British archaeology; this conveys a false sense of backwardness when compared to Mediterranean cultures; whereas in fact, the undoubted wisdom of the Druids and Bards was maintained orally until it was eradicated by the Romans and later Christian conversion. We may see that the religion and wisdom of the Hyperboreans was greatly respected by the Mediterranean nations with whom they had contact.

In so far as we may equate Hecataeus with the older poetic references to Hyperboreans then he would seem to be describing the circumstances of Britain at a time *significantly earlier* than the other classical historians. We may also take from it a view of a peaceful political unity and high-culture that had yet to fragment into the tribes of the late Iron Age. A recent comprehensive analysis of the [fragments of Hecataeus](#) would suggest that this Hyperborean culture *remained recognisable* at least until he could include the description in his fourth century BC travel guide. It is possible that the description was derived from the lost book ‘*On the Ocean*’ written by Pytheas after his circumnavigation of Britain. [24]

Herodotus, writing earlier around 450 BC did not know of the existence of Britain, nor even of the western ocean, but he did know of the Hyperboreans from the poetry and he wanted to know where they were. This would seem to suggest that they had already disappeared as a unified nation before 450 BC. He knew only of a people called *Cynetae* (or Cynesians) beyond the Celts; so could these be the same people? They are more likely to have been the Belgae, whom Caesar tells us arrived at the Channel coast from across the Rhine around this time and may indeed have pushed the *Cantii* farmers into Kent. [*Gallic Wars II, 4*] We therefore see both historical and DNA testimony for the migration of Belgic tribes from across the Rhine into southern Britain in the centuries before the Romans. [25] We do not know for certain whether the original language of the Belgae was Celtic or Germanic (old English?); neither do we know how strongly, if at all, they had adopted Druidism. The lack of any similar DNA evidence for *invasion* from further north suggests that the culture of the tribes occupying the Midlands had changed little since the era of the Stonehenge builders – although this would not rule-out a trickle of immigration and coastal trading stretching back into the Bronze Age. So again we may ask: how long did their ‘unique’ language and communal culture persist in southern and central Britain?

Iron Age Tribes

The term ‘Iron Age hill forts’ has been in use since the earliest archaeology. There is little trace of fortifications in Britain before the late Bronze Age around 900 BC; certainly, they were fewer and less elaborate. The earlier ‘hengese’ dating back to the Neolithic do not seem to have been defensive, rather they may have been community places to enclose animals. The evidence of a common style of monuments, as far north as Orkney, during the era when Stonehenge and the other stone circles were built, would suggest that the island of Britain formerly shared a unified governance and culture.

We may find something of this centralised authority lingering in the timeless legends of a ‘King Arthur’ as ruler of all the Britons, which we find in the later pseudo-histories. Perhaps there was a remembered age when the Britons believed, as in later eras, that the best place to defend the island from foreign invaders was in France! A millennium before the continental expansion of the Iron Age ‘Celts’ there may have been a cross-channel hegemony in which the doctrine of the Druids could spread. This would not be out of line with the new DNA evidence, which suggests that immigration to Britain peaked during the late Bronze Age. A trickle of continental immigrants over a long period is suggestive of that which could freely occur within an ‘empire’ under a stable ruling dynasty. As with the later Norman conquest, replacing the rule of a single king is far easier than the piecemeal Roman conquest of numerous unruly tribes. This could best explain gradual culture and language transformation without leaving a record in the DNA. We should always remember that for this same era Egyptologists can offer us pages of history about the dynasties of kings and their conquests, but for Britain and northern Europe we have only a void.

From the late Bronze Age onwards archaeologists detect evidence of fortified settlements (‘hill-forts’), suggesting that the unity of earlier times may have broken down. [26]. However, the new genetics now tells us that there was little new immigration. Our knowledge of the ethnic divisions of pre-Roman Britain comes mainly via Ptolemy’s geography, from coin hoards, and from the tribes mentioned in accounts of the Roman campaigns; but these only reflect the tribal divisions just prior to the Roman conquest. Other than for Caledonia, and the intrusive Belgic tribes, we have scant information to distinguish the various ‘nations’ either ethnically or linguistically, beyond the outline descriptions of Tacitus above. We may perhaps take this to infer that there was little distinctiveness for foreign observers to note, beyond the unique communal society and the survival of a peculiar language in the north.

The *Brigantes* (‘hill-people’) a confederation who occupied lands from the River Trent to Northumbria, were quick to ally with the invading Romans; their queen clearly seeing them as a less immediate threat than her tribal neighbours. Some early linguistic studies had suggested they were related to the [Brigantes of Ireland](#), perhaps speaking the Insular Celtic of the Milesians. [27]. There is no certainty as to their language nor evidence that they ever tattooed their skin; however archaeologists determine that they were long established in the region. They must be a prime candidate as one of the tribes of the interior who preserved older customs. As with Wales, the 2015 DNA study found the Yorkshire Dales and Cumbria regions to be genetically distinct.

Picts and Scots

The geneticists may have put the final nail in the coffin of the ‘Celtic Picts’. Celtic linguists continue to look (without success) for Celtic words within the later Pictish Ogham inscriptions; and the assumption of Celtic Picts remains embedded in the literature because of the supposed presence there of a p-Celtic ‘Pictish’ language. [28] This dogma stretches back to nineteenth century authorities; the archaeology has never really endorsed the idea and now the DNA evidence also emphasises the uniqueness of the Scottish population. The new genetics suggests that an “ancestry convergence” took place across Europe during the Late Bronze Age (the proto-Celtic era 1300-800 BC) showing a homogenized proportion of heritage from the Early European Farmers. However this convergence did not extend to Scotland (or to Sardinia apparently) which continued to show a proportion of such ancestry unchanged since the early Bronze Age. The 2021 DNA study emphasises that this argues against any substantial immigration to these regions from central Europe during this period. The report does not define precisely where we should draw the ancient cultural boundary or where pockets of older ancestry might have persisted further south.

All of the historical and legendary sources that we may consult are firm that the Picts came from ‘Scythia’, either directly by sea, or in Irish sources overland through Gaul. *Both may be true!* The relative clarity of the historical sources suggest that the Pictish invasion was a more recent ‘Iron Age’ event. The confidence that they were ‘Celts’ is purely a construct of the linguists. Rather we should expect (based on the legends of origin) that the Scottish population should reveal an ancestry closer to the pastoralists of Baltic Europe and Russia rather than from European farmers, well-mixed, of course, with Scots-Irish heritage.

Another DNA study, for the Orkney Islands, was published in early 2022 and offers us a curious story. [29] In popular newspaper headlines: “*Bronze Age immigration to Orkney ‘mostly women’*” (*Daily Express*) which shows a misunderstanding by the journalists of the mitochondrial DNA ancestry. In summary, the research would indicate that Neolithic people persisted in Orkney longer than in the south, before being largely replaced by people of “steppe ancestry” during the mid-Bronze Age. However, the mitochondrial DNA would indicate that the female-lineage descends from the immigrants, with the older male-lineages persisting for longer – until they were ousted by another wave of incomers (the Picts?) during the Iron Age and later still by the Vikings. It would be interesting to see how the geneticists would view these findings in the light of the historical reports of communal social organisation, but there is no consideration of the historical sources within a study that is again dense with jargon. The 2015 study had previously shown the DNA ancestry of Orkney to be complex and varying from island to island. It may demonstrate, in microcosm, what was going on further south.

It would seem then, that Scots are not only distinct from the southern Britons but distinct from most of Europe; and also, it would seem, different from each other. We surely didn’t need geneticists to tell us that!

Conclusions

How should one sum-up the above comparison of DNA with the history and legends? We may see that the picture of British prehistory that emerges from the new science does not conflict with the one we have always had from the classical historians and the legendary sources. Should we even consider ancient history and legends to be sources of ‘evidence’? Certainly, we see more congruence between the DNA and the history than by comparing it to the chronology that the archaeologists formerly proposed based on artefacts and excavations. However, we seem also to have more surviving historical references to the people of the northern and western coasts of Britain than we have for the east coast and interior of the island. This may reflect the fact that the west coast was accessible to Mediterranean voyagers, but also not to forget that this represents a minority of the mainland population, then, as it does today.

Most important to note is that none of the surviving traditions of British or Irish origin would describe the inhabitants as indigenous to the islands; they are all in one way or another *colonists* who remember a homeland in the east; migrating either via northern Europe or via Iberia and the Mediterranean. Therefore, we must conclude that the oral tradition believed by some aboriginal tribes in the interior of Britain, as mentioned by the various Roman authors, has not survived in any traditional source. We therefore have to infer who they were from those ancient tribal groups whose traditions we do *not* possess.

One may suggest a sequence as follows. The indigenous hunter-gatherers of the Mesolithic persisted in the forested interior as the first farmers colonised the best land of southern Britain and Ireland during the warm period of the mid-Holocene c.4000 BC. This is the era remembered in the oldest Welsh and Irish ‘myths’ rather than in their more concise ‘legends’. This marks the era that archaeologists would term the early and middle Neolithic when the farmers were able to expand their range and forests were cut down; it corresponds to the ‘elm decline’ that climatologists have long discussed. Towards the end of the fourth millennium BC this population of early farmers was severely reduced by rapid climate change and perhaps also by natural catastrophe. There followed

centuries of agricultural decline and regeneration of forests as peat bogs enveloped the neglected fields. This hiatus of around three-hundred years is now verified by the science. It should make scientists treat the legends that early British and Irish colonists inherited an 'empty' land with greater respect than hitherto.

A new period of climate stability allowed recovery and we see new monument styles: the era of the stone circles. A wave of immigrants or invaders from the Steppes eventually reached Britain and overwhelmed the recovering farmers during the Late Neolithic 'Stonehenge era' after 3000 BC. A long period of evolution followed during which Britain remained, for the most part, a unified culture into which generations of new settlers came over from the continent. We may equate this with the fabled 'Hyperborean' era. Further climate fluctuations during the mid-late Bronze Age (after about 1600 BC) and perhaps also new and hostile invaders, may then have led to a collapse of central authority, with fragmentation into the regional tribes and 'nations' during the Iron Age. The influx of new settlers declined. The DNA evidence allows us to put the vague history and legends into a loose chronological sequence that was not formerly attainable solely from archaeology.

The origin of the immigrants, *as it is suggested in the legendary sources*, does not conflict with those given by DNA, although geneticists may wish to 'fine-tune' the route to the west that the various genes took in their journey from Anatolia and the Steppes. The Irish invaders may have been a mix of the Aegean pre-Greek peoples similar to the first farmers, together with later Greeks who were part of the dispersal from the Steppes. The Welsh triads imply a similar origin from Anatolia and the Black Sea. The Picts and some of the earlier Irish invaders may have come instead via a northerly route through Germany and the Baltic coast. Colonists who came via the Iberian route included the people who spoke Celtic. We may suggest that the origin of seaborne migrants from Atlantic coasts reached Ireland and southwest Britain in more than one wave. We may then see other, probably late, arrivals from Gaul and the Rhine into the south and east. However, this is the region from which we have the poorest survival of history and legends to suggest origins, so we can only follow the Roman information. Overall, it would suggest that the oldest cultures survived longest in the north and west where they were protected behind the hills and other natural barriers.

The question of the arrival of the Celtic languages remains open and the DNA can neither confirm nor refute the traditional and historical sources. It would, however, overturn the long-standing belief that the Celtic languages arrived along with a single wave of Iron Age invaders; clearly they were present much earlier. If you wish to believe the Welsh traditions then the arrival of Celtic languages must be placed early, possibly at the same era as the legendary Irish invaders c.3000 BC. Alternatively, you may envisage a wave of Celtic-speaking settlers into Southwest England and South Wales, during the later Bronze Age, which left the older 'peculiar' language of the Hyperboreans steadily retreating to the North. However this older language was probably *not* Pictish. There is every reason to suggest that the Pictish language was a later arrival along with their historically remembered invasion from Scythia; and that the older language survived alongside it in western Caledonia right up to the historical Pictish period. It is the speakers of this older language whose myths and legends we have lost.

During the mid-late Bronze Age we may see a long period of some two thousand years of relatively stable and evolving cultural exchange with the continent, during which there may have been numerous incursions, both hostile and permitted, as we find in the Welsh triads; along with refugee migrants from the same regions as the earlier immigrants. We may compare with the European colonisation of the Americas; where immigrant farmers have overwhelmed the indigenous inhabitants within just five-hundred years. Here we consider a period of three-thousand years, during which patrilinear newcomers simply produced more children surviving to adulthood.

Numerous intrusions of tribes from the east into western Europe are recorded during historical times, from the Cimmerians and Scythians to the Cimbri and Teutones in the Roman annals; later the Huns, Goths and other barbarians massing on Roman borders, through to the later Mongol empire. There is every reason to believe that comparable intrusions from the Steppe region and beyond were ongoing throughout the thousands of years of the Neolithic and Bronze Age, driven by deteriorating climate. This population-pressure from the east pushed the established European tribes to migrate even further west and drove some across the sea. We need not always see conquests led by warlords, rather a steady trickle of 'refugees' who merged into their new homeland. Such trickle-migration does not show in the archaeology, but it is revealed in the genes.

As the new research would suggest, invasive tribes into southern Britain during the Iron Age were restricted to the south coast and East Yorkshire. It seems unlikely that these small groups alone could be responsible for the shift to Celtic language, as later history would suggest that whichever culture holds the English midlands will ultimately dominate the island. Furthermore, the fact that the archaeologically-attested settlements were remembered by contemporary historians would suggest that there were no others worthy of note. The culture of Middle-Britain thus remained little changed from earlier millennia, with the older language being gradually supplanted by the Continental Celtic of the Britons from the southwest at some time around 500 BC.

A note on terminology and abbreviations

The preceding should be viewed as a cross-disciplinary article for the interest of the general reader and historian, rather than as a genetic study. Specialist terminology ('jargon') has been held to the necessary minimum and explained where its usage cannot be avoided. You may find the following abbreviations in the 2021 report and elsewhere:

WHG	Western Hunter Gatherers	C/EBA	Chalcolithic/Early Bronze Age = Copper Age
EHG	Eastern Hunter Gatherers	MBA	Middle Bronze Age
CHG	Caucasus Hunter Gatherers	M-LBA	Mid to Late Bronze Age
SHG	Scandinavian Hunter Gatherers	LBA	Late Bronze Age
WSH	Western Steppe Herders	IA	Iron Age
EEF	Early European Farmers (from Anatolia)		

Urnfield Culture – the 'proto-Celtic' nation, now often used by archaeologists in preference to the former ethnic term 'Celts'
'Steppe Ancestry' – now preferred to the former ethnic term 'Indo-European'

Yamnaya Culture – a Neolithic steppe-pastoralist culture within the above grouping.

Corded Ware Culture – a Neolithic culture situated north of the steppe pastoralists.

Insular Celtic – now preferred to *q-Celtic* as the term for Irish Gaelic languages.

Continental Celtic – now preferred to *p-Celtic* as the term for British and Gaulish forms of Celtic.

Relevant Hyperlinks

These will provide additional research background, but hopefully the narrative will stand-alone should they become broken.

<https://www.nature.com/articles/s41586-021-04287-4>

<https://www.bbc.co.uk/news/science-environment-59741723>

<https://www.independent.co.uk/news/the-family-link-that-reaches-back-300-generations-to-a-cheddar-cave-1271542.html>

<https://www.dailymail.co.uk/sciencetech/article-5453665/Was-Cheddar-man-white-all.html>

<https://www.newscientist.com/article/2161867-ancient-dark-skinned-briton-cheddar-man-find-may-not-be-true/>

https://archaeologydataservice.ac.uk/archives/view/eh_monographs_2014/contents.cfm?mono=1089041

<https://www.hud.ac.uk/news/2022/february/rewriting-genetic-history-of-prehistoric-orkney/>

<https://www.nbcnews.com/health/health-news/new-genetic-map-shows-ancient-british-divisions-linger-n326036>

<https://www.expressandstar.com/news/science-and-technology/2022/02/07/bronze-age-immigration-to-orkney-mostly-women-scientists-discover/>

<https://www.nature.com/news/uk-mapped-out-by-genetic-ancestry-1.17136>

<https://www.nature.com/articles/s41598-017-17124-4>

https://en.wikipedia.org/wiki/Pollen_zone

https://www.academia.edu/10372980/Is_there_evidence_for_a_Neolithic_crisis_or_revolution_in_3000BC

<https://www.abroadintheyard.com/maps-britain-ireland-ancient-tribes-kingdoms-dna/>

<http://www.attalus.org/translate/poseidonius.html>

<https://www.worldhistory.org/article/1078/on-the-ocean-the-famous-voyage-of-pytheas/>

<http://classics.mit.edu/Caesar/gallic.5.5.html>

https://www.third-millennium.co.uk/_files/ugd/e5604c_465f3f96346041fb94f8e5f960804f1f.pdf

<http://www.zendonaldson.com/twilight/camelot/triads/index.htm>

<https://www.maryjones.us/jce/LGEoverview.pdf>

<https://www.ancienttexts.org/library/celtic/ctexts/lebor3.html#39>

<https://www.nature.com/articles/s41586-020-2378-6>

https://www.academia.edu/27786980/Hecataeus_of_Abdera_and_his_work_On_the_Hyperboreans_about_300_BC_The_fragments_with_a_historical_commentary_2016

<https://www.worldhistory.org/Hyperborea/>

https://www.loebclassics.com/view/diodorus_siculus-library_history/1933/pb_LCL303.39.xml?readMode=recto&result=1&rskey=HAqqHI

<https://www.cell.com/action/showPdf?pii=S0002-9297%2807%2962721-9>

https://www.academia.edu/71621445/Belgic_Atrebates_settlement_of_Britain_Draft_?auto=download

<https://www.wales247.co.uk/ancestry-dna-shows-genetic-link-between-wales-and-spain>

<https://www.nbcnews.com/health/health-news/new-genetic-map-shows-ancient-british-divisions-linger-n326036>

https://livrepository.liverpool.ac.uk/3135296/1/200781399_Feb2021.pdf

<https://archaeology-world.com/scientists-find-that-tin-found-in-israel-from-3000-years-ago-comes-from-cornwall/>

<https://www.libraryireland.com/Pedigrees2/brigantes.php>

Notes and References

Citations of ancient authors are given as square parentheses within the main text,

1) Patterson, N., Isakov, M., Booth, T. et al. (2021) Large-scale migration into Britain during the Middle to Late Bronze Age. *Nature* 601, 588–594. <https://doi.org/10.1038/s41586-021-04287-4>

2) Cristian Capelli et al. (2003) Y Chromosome Census of the British Isles, *Current Biology*, 13, 979–984, May 27, 2003, DOI 10.1016/S0960-9822(03)00373-7

- 3) Leslie, S., Winney, B., Hellenthal, G. *et al.* The fine-scale genetic structure of the British population. *Nature* **519**, 309–314 (2015). <https://doi.org/10.1038/nature14230> <https://www.nature.com/news/uk-mapped-out-by-genetic-ancestry-1.17136>
- 4) Gilbert, E., O'Reilly, S., Merrigan, M. *et al.* The Irish DNA Atlas: Revealing Fine-Scale Population Structure and History within Ireland. *Sci Rep* **7**, 17199 (2017). <https://doi.org/10.1038/s41598-017-17124-4> <https://www.nature.com/articles/s41598-017-17124-4>
- 5) See page 1 of ref. 1 above
- 6) See detailed maps and summaries in refs 3 & 4 above.
- 7) Shennan, S. *et al.* (2013) Regional population collapse followed initial agriculture booms in mid-Holocene Europe. *Nat. Commun.* **4**:2486 doi: 10.1038/ncomms3486.
- 8) Bevan, Andrew, *et al.* (2017) “Holocene Fluctuations in Human Population Demonstrate Repeated Links to Food Production and Climate.” *Proceedings of the National Academy of Sciences of the United States of America*, vol. 114, no. 49, National Academy of Sciences, 2017, pp. E10524–31, <https://www.jstor.org/stable/26486018>
- 9) See page 1 of ref. 1 above
- 10) Golding A.. 1587. *Solinus - Collectanea Rerum Memorabilium*, (reprinted in facsimile by Scholars Facsimiles and reprints, Gainesville, Florida, 1955).
- 11) Morris, John (1973) *The Age of Arthur: A History of the British Isles from 350 to 650*, Weidenfeld & Nicolson, London see pp 190-191
- 12) see ref 3 above
- 13) Dunbavin, Paul (2020) On the Coligny Calendar and the Calendar in Plato's Critias, in *Prehistory Papers*, pp 23-30 Third Millennium Publishing, Beverley, ISBN: 978-0-9525029-4-4
- 14) Bromwich R."Trioedd Ynys Prydain: The Myvyrian 'Third Series' *Transactions of the Honourable Society of Cymmrodion* 1968 Part II pp 299-338 for Iolo Williams' Triads 1-50 plus Notes, and 1969 Part I pp 127-155 for Triads 50-126 plus Notes., see p 301
- 15) Bromwich, Rachel (1978) *Trioedd Ynys Prydein – The Welsh Triads*, University of Wales Press, Cardiff; see p 90
- 16) *ibid* p 92
- 17) Halkon, Peter & Starley, David. (2011). Iron, Landscape and Power in Iron Age East Yorkshire. *Archaeological Journal*. **168**. 133-165. 10.1080/00665983.2011.11020831.
- 18) Sykes, Bryan, (2007) *Blood of the Isles: exploring the genetic roots of our tribal history*, Bryan Sykes, Bantam Press, ISBN 0593056523
- 19) See ref 4 above
- 20) Watson, W.J. (1926) *The Celtic Place Names of Scotland*, Edinburgh, (1986 edition ISBN 1-874744-06-8, pp 40-41
- 21) *ibid*, p 64
- 22) I Cassidy, L.M., Maoldúin, R.Ó., Kador, T. *et al.* (2020) A dynastic elite in monumental Neolithic society. *Nature* **582**, 384–388 (2020). <https://doi.org/10.1038/s41586-020-2378-6>
- 23) APA citation: The enigma of bronze age tin (2019, September 13) retrieved 28 February 2022 from: <https://phys.org/news/2019-09-enigma-bronze-age-tin.html>
- 24) Joorde, R (2015) Hecataeus of Abdera and his work “On the Hyperboreans“ (about 300 BC): The fragments with a historical commentary, [Raffaël Joorde - Academia.edu](http://RaffaëlJoorde-Academia.edu)
- 25) Pullen, William (2022) [Belgic Atrebatas settlement of Britain \(Draft\) | William pullen - Academia.edu](http://Williampullen-Academia.edu)
- 26) Campbell, Lorraea, (2021 Thesis) https://livrepository.liverpool.ac.uk/3135296/1/200781399_Feb2021.pdf
- 27) Counihan, Martin (2019) Ptolemy's Tribes of Ireland (revised) mjc@gmx.ie Second revised version, 1 March 2019 https://www.academia.edu/38482760/Ptolemys_Tribes_of_Ireland_revised_version
- 28) Rodway, S. (2020). The Ogham Inscriptions of Scotland and Brittonic Pictish. *Journal of Celtic Linguistics*, **21**(1),173-234. <https://doi.org/10.16922/jcl.21.6>
- 29) Dulias, K *et al* (2022) “Ancient DNA at the edge of the world: Continental immigration and the persistence of Neolithic male lineages in Bronze Age Orkney” by Katharina Dulias, George Foody, Pierre Justeau *et al.*, 7 February 2022, *Proceedings of the National Academy of Sciences*.

Other References

- Language origin debate rekindled, *Nature*, 518, 19 February 2015, (Corrected 23 February 2015) pp 284-5 https://www.nature.com/news/polopoly_fs/1.16935!/menu/main/topColumns/topLeftColumn/pdf/518284a.pdf
- Hoag, H. Y chromosomes rewrite British history. *Nature* (2003). <https://doi.org/10.1038/news030616-15> <https://www.nature.com/articles/news030616-15>
- Capelli, C. *et al.* A Y chromosome census of the British Isles. *Current Biology*, **13**, 979 - 984, (2003).
- Sykes, Bryan, (2007) *Blood of the Isles: exploring the genetic roots of our tribal history*, Bantam Press, London, ISBN 0593056523
- McEvoy, B *et al* (2004) The Longue Durée of Genetic Ancestry: Multiple Genetic Marker Systems and Celtic Origins on the Atlantic Facade of Europe, *AJHG*, Vol 75, Issue 4, P693-702, October 01, 2004, <https://doi.org/10.1086/424697>

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