

G13: Back-tracking from Babel

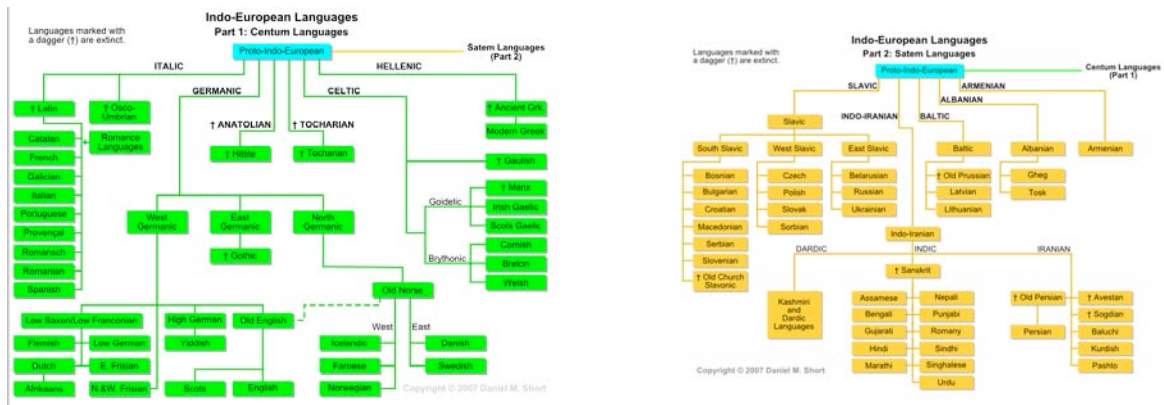
Genetics and the Indo-European Languages

WC 3874

If you are old enough to remember *The Hitch-hiker's Guide to the Universe*, you will recall that the answer to the meaning of life, the universe and everything is 42. Of course this is the correct answer sometimes — it is, for example, the number of my house. However, it seems to leave unanswered several basic questions in life, one of which is *Why do we need two presenters for the evening news?* Thankfully, the answer here is not "42"!

Another of the great unanswered questions, at least in my universe, is *Why are there so many languages?*

Starting with the curious tale of the Tower of Babel, there have been many attempts to explain, if not *why* then *where did they come from?* Half a century ago when I last did linguistics, the academic gospel truth was that some time after ~2,000 BC, the original Indo-European language was brought to us by a horde of Bronze Age warriors galloping on horseback from the steppes of Central Asia. Once in Europe — and also in the Indus Valley, because they seem to have gone in several directions at once — they overwhelmed the simple cultures they found there and replaced the local languages with their own.



Indo-European Languages are divided into two groups, Centum and Satem

Now, with more recent archaeological research and the translation of ancient languages unreadable in the previous century to show the way, the invasion by Asian hordes theory has been abandoned. For example, the earliest Indo-European languages such as Mycenaean Greek, Hittite and Sanskrit were already mutually unintelligible by 2,000 BC so, if they were to have a common ancestor, it must have been long before that, probably in the Neolithic at least.

One of the best-known archaeologists to suggest an alternative was Lithuanian-born Marija Gimbutas¹ who became widely-known and acclaimed among feminists for her work on the so-called "Goddess". Gimbutas proposed that the Indo-Europeans originated in the Russian steppes. Later, in 1985, Georgian linguists Gamkrelidze and Ivanov² suggested that the origin of the Indo-Europeans was somewhere on the Armenian plateau.

Then, also in 1985, and after an extensive survey of both the linguistic and archaeological evidence, Russian linguist and historian Igor M. D'iakonov published his seminal paper on the subject, *On the Original Home of the Speakers of Indo-European*, in which he proposed that the original speakers of Proto-Indo-European (often called PIE) was to be found in the Balkan Peninsula where they enjoyed a mixed economy based on farming and animal husbandry.³

In 1988, Colin Renfrew published his seemingly heretical book, *Archaeology and Language: The Puzzle of Indo-European Origins*. In this milestone work, he proposed that the Indo-European languages were brought to Europe by the people who brought us agriculture from Anatolia. Although attracting a lot of attention, Renfrew's proposal was never fully accepted. More recently, genetic studies have rather undermined his notion by showing that the farmers who moved into Europe during the Neolithic contributed only a minority of the DNA we have inherited; probably in the vicinity of 80% of present-day genetic inheritance came to us from the Palaeolithic. More recently Emeritus Professor Kalevi Wiik⁴ at Tuku



University in Finland has also proposed an origin in Southeast Europe but aroused considerable controversy when he also suggested the Finno-Ugrian family⁵ might have been northern Europe's oldest languages.

Map 1: European language distribution at the climax of the Ice Age and the following period, 23,000 to 8,000 BC (Ba = Basque, U = Uralic, X's = unknown languages)

Using genetic as well as archaeological and anthropological data to support his

¹ Gimbutas, M: "The Beginning of the Bronze Age in Europe and the Indo-Europeans: 3500-2500 B.C." *Journal of Indo-European Studies*, Volume 1, 1973, p. 163

² Gamkrelidze, T. V. and Ivanov, V. V.: "The Migrations of Tribes Speaking Indo-European Dialects from their Original Homeland in the Near East to their Historical Habitations in Eurasia." *Journal of Indo-European Studies*, Volume 13, 1985, p. 49.

³ D'iakonov, I. M: "On the Original Home of the Speakers of Indo-European." *Journal of Indo-European Studies*. Volume 13, 1985, p. 92

⁴ Wiik, K: Europe's Oldest Language, dated 3/99 and available at <http://www.lib.helsinki.fi/bff/399/wiik.html>. This was the only article I was able to find by Wiik in English, the rest are in Finnish.

⁵ About 3% of Europe's population speak a Finno-Ugrian language - ie, Hungarian, Finnish and Estonian.

theory, Wiik argued that from ~23 KYA to 8KYA, Europe was divided into three main regions: those marked on his map as Ba and U were populated by hunters of large animals, abundant then but many of which are now extinct. These people, he says, spoke languages related to Basque and Finno-Ugic respectively. Wiik's Region X on the other hand, was inhabited by hunters of small animals and was fragmented into areas where smaller unknown languages which have since disappeared.

Then, Wiik claims, by 5,500 BC the extinction or reduction in the numbers of large animals in the Ba and U regions meant that the inhabitants had to change to hunting smaller animals while the inhabitants of Region X survived by developing agriculture and the other blessings of the Neolithic. It was here, in the Balkans, he hypothesised, that the Indo-European languages were born, serving there as a *lingua-franca* and gradually diffusing outwards to include the other regions. However, on the fringes of Europe, in Iberia and Northwest Europe, former hunters apparently adopted farming without the Indo-European languages which went with it, with the result that Basque and the Finns are the only descendants of the Ice Age hunters who do not speak an Indo-European language.

In 2003, Gray and Atkinson⁶ set out to test the two theories of the origin of IE, the 'Kurgan expansion' and the 'Anatolian farming' hypotheses. They based their study on the generally accepted view that languages derived from a common, early source tend to have many words in common but that, as time goes by, their vocabularies increasingly diverge. Their results strongly supported the Neolithic dispersal theory by showing the Indo-European languages diverged from the earlier Anatolian ones in what was almost certainly a Balkan homeland.

The Palaeolithic Continuity Theory

The Finno-Ugrian or — as it is more commonly known — Uralic Continuity Theory has several advantages over earlier suggestions, but as **Mario Alinei**⁷ indicates, most importantly

(1) it replaces an earlier 'invasion theory', quite similar to the traditional IE one, and practically modelled on it.

(2) It represents the first claim of uninterrupted continuity from Palaeolithic of the second European linguistic phylum, thus opening the way to a similar theory for IE.

⁶ Gray, RD and Atkinson, QD: "Language-tree divergence times support the Anatolian theory of Indo-European origin," *Nature* 426, 435-439

⁷ The Paleolithic Continuity Theory on Indo-European Origins: An Introduction, at <http://www.continuitas.com/intro.html>

This "invasion theory" which we keep striking time and again as the explanation for culture change in Europe has a darker side which Alinei outlines in these words when he examines the history of linguistic thought about the introduction of Indo-European:

Here is, for example, how Adolphe Pictet, the founder of the so called Linguistic Paleontology, in his book Les origines des Indo-européennes ou les Aryas primitif. Essai de paléontologie linguistique, Paris, 1859-63, described the "Arian race": "a race destined by the Providence to dominate the whole world... Privileged among all other races for the beauty of its blood, and for the gifts of its intelligence, ... this fertile race has worked to create for itself, as a means for its development, a language which is admirable for its richness, its power, its harmony and perfection of forms".

In short, the first IE specialists – imbued with European colonialism of the 19th century - chose to see the Proto-Indo-Europeans as a superior race of warriors and colonizers, who would have conquered the allegedly "pre-IE" Neolithic Europe in the Copper Age, and brought their 'superior' civilization to it. Moreover, since it was necessary for the Indo-European warriors to have weapons and horses, also the choice of the Copper Age was obligatory, because this was the context of Battle Axes, metallurgy and horse riding. At the same time, while the concept of the Arian super-race gave shape to the myth of the Battle-Axe horse-riding invaders, another myth, within the Arian larger myth, emerged: Pangermanism. Within the Arian superior race, the German father-founders of IE studies saw the Germanic people as the supermen, the purest and the closest to the original blessed race, and chose the Germanic area as the Urheimat of the Proto-Indo-Europeans.

Of course, such ideology fell into serious disrepute after World War II. Alinei says that a new scenario was then introduced by Maria Gimbutas who, he says, was an ardent Baltic nationalist and replaced the Germans as the PIE Battle-Axe super-warriors by Baltic elites.

Alinei is one of the proponents of a still controversial but very probable theory called the **Palaeolithic Continuity Theory**. This argues that Indo-European was essentially the very long-term evolution of the indigenous culture or cultures of the Palaeolithic. It contends this is demonstrated by a substratum of words and grammatical structures which reflect *the awakening and developing of human conscience and cultural activities of an already separated and independent language phylum*. Words such as those for *dying*, which have the PIE base form [*-mer], exist throughout the region while words for *burying* exist in different forms, suggesting that by

...the time ritual burying began, in Upper Paleolithic, IE groups were already differentiated.

Also, among other examples, he adds that

.....words for typical Mesolithic inventions, such 'bow', 'tar', fishing tools, carpentry and many others, are different in each IE group, proving that by Mesolithic time IE languages were already differentiate.

The Palaeolithic Continuity Theory, according to Alinei, also has the advantage that each cultural sequence

..... corresponding to a given geographical sub-area, has thus a very distinct and strong cultural identity, which could easily be connected, depending on the period and the area involved, with a language family, a language group, or a dialect group. If, for example, the Neolithic Cardial Ware can be seen as corresponding to an already differentiated Italic group, each of its later sub-areas can be interpreted as representing a kind of 'dialect' differentiation from the same common 'language'. The same can be said for the LBK in Germany, and for similar large cultural units in other areas.

All of this seems to correspond quite closely with what we should expect if one or more populations speaking one and the same language –such as the Proto-Indo-Europeans or the Proto-Uralic people- had first spread to Europe from Africa, and then had broken up into different groups (cultural 'orbits'), as a result of their exposure first to different ecological niches, different social networks and different neighbours.....⁸

Alinei gives several examples of stable linguistic borders which reflect divisions among people from the Mesolithic or Neolithic times. For example, he cites:

- the frontier between the Uralic speaking area in the north and IE in the south of Latvia — this coincides with a frontier between the Neolithic Pit-and-Comb Ware culture in the north and, in the south, a complex of cultures including Corded Ware/Boat Axes and Bay Coast cultures.
- the language frontier in Alsace separating the Celtic (now French-speaking) area, from those of the now German-speaking area. This was the frontier between a group of Neolithic Celtic cultures on the one hand and on the other, the LBK and associated cultures.
- The complex of language and dialect frontiers in the Western Alps, respectively between German and Neo-Latin in Switzerland, between

⁸ All of the foregoing from Alinei, *ibid.*

Franco-Provençal and Occitan in France and Italy, and Gallo-Italic in Italy. These were divisions between cultures derived from the Cardial Impressed Ware on the one hand and the LBK-derived cultures in Germanic Switzerland on the other.

This continuity of very ancient linguistic features of the various regions leads the proponents of the Palaeolithic Continuity Theory to conclude

(1) The 'arrival' of Indo-European people in Europe and Asia must be seen as one of the major episodes of the 'arrival' of Homo sapiens in Europe and Asia from Africa, and not as an event of recent prehistory.

(2) The differentiation process of IE languages from the Proto-IE common language, reconstructed by comparative linguistics, as well as that of their already separated branches (Proto-Celtic, Proto-Germanic, Proto-Italic, Proto-Balto-Slavic, Proto-Greek etc.) into their presently 'substandard', 'dialect' varieties, must have taken an extremely long time, and they must have been associated first with the varying episodes of the original migration from Africa, and then – with an increasingly faster tempo as social stratification and colonial wars began - with the varying cultural, social and political stages the new fragmented groups went through in the different settlement areas.

Accepting these conclusions, Alinei and his colleagues believe has several corollaries:

(a) The 'mysterious arrival' of the Celts in Western Europe is replaced by the scenario of an early differentiation of Celts, as the westernmost IE group in Europe. Western Europe must of course have always been Celtic, and the recent prehistory of Western Europe - from the Megalithic culture through the Beaker Bell to the colonialistic La Tène – must have all been Celtic. Consequently, the duration of the colonial expansion of the Celts was much longer than thought, and its direction was from West to East and not vice versa.

(b) The extremely successful (and sedentary) Mesolithic fishing cultures of Northern Europe must be attributed to already differentiated Celts, Germanic people and Balts, besides to Uralic people.

(c) The continental Germanic area must have extended, before the deglaciation, from the Alps to the icecap, including what are now the Frisian islands and part of the British islands. After the deglaciation, in Mesolithic, it expanded to Scandinavia (where its earlier, 'Mesolithic' stage is still best preserved), and its first Neolithic appearance was the LBK.

(d) *What is now called the Romance area - closely corresponding to the area of the Epigravettian Paleolithic culture, of Mesolithic cultures such as Castelnovian and Sauveterrian, and of the Impresso/Cardial culture of Neolithic - instead of representing solely the remnant of Roman imperialism, must now be seen as mainly an original Italic (or Italoid, or Ibero-Dalmatic) linguistic area, in which several proto-languages akin to Latin, besides Latin and the other Italic languages, were spokenand for the speakers of which the Latin of Rome must have been an (easy to learn) superstrate.*

(e) *The totally absurd thesis of the so called 'late arrival' of the Slavs in Europe must be replaced by the scenario of Slavic continuity from Paleolithic, and the demographic growth and geographic expansion of the Slavs can be explained, much more realistically, by the extraordinary success, continuity and stability of the Neolithic cultures of South-Eastern Europe (the only ones in Europe that caused the formation of tells)⁹.*

Cory Panshin and the Language Families of Eurasia

At the risk of covering the same ground twice, I want to take a look at a somewhat different approach to the continuity of Indo-European, a speculation which takes us much further back in time than the expansion of *Homo sapiens* in Europe during and soon after the LGM. Some of the terms and dates might be slightly different but please bear with me.

In a previous session I quoted extensively from Cory Panshin and her excellent on-line essay called *The Paleolithic Europeans*¹⁰ and it is from this I wish to borrow once more for the remainder of this session. Mrs Panshin argues that if there was both genetic continuity and cultural continuity during the transition from the Mesolithic to the Neolithic, then *there must have been linguistic continuity as well*.

If asked what are the odd-men out among the languages of Europe, she says that most of us would unhesitatingly answer Basque, Finnish and Hungarian. Ignoring Basque for the moment, the other two, Finnish and Hungarian belong not to the Indo-European family of languages but to the Uralic (Wiik used the name *Finnou-Ugic*). However, most of the languages belonging to this family are found in the Ural Mountains and northwestern Siberia. These people seem to have been there since the Pleistocene, moving little, mostly north or south as the Ice retreated or advanced during the interstadials and stadials of that era.

Cory Panshin takes the argument even further back when she writes:

⁹ Tells or Kurghans (the latter is a Turkish word for the burial mound characteristic of the Steppe people. The above quotation is a slightly edited version of Alinei's text - *ibid*.

¹⁰ Cory Panshin: *The Paleolithic Europeans*,
<http://www.panshin.com/trogholm/wonder/indoeuropean/indoeuropean1.html>

In recent years, certain linguists with the courage to look for really deep relationships have suggested that Indo-European, Uralic, and the Altaic family of languages (which includes Turkic and Mongolian) are all members of a single, ancient language group. This so-called Eurasiatic group, if it is authentic, is so old that the commonalities among its members have been reduced to a small core of basic vocabulary plus certain grammatical elements. And yet there are good archaeological and genetic reasons for believing in its reality.

However, even this ancient Eurasiatic family would be recent compared to a still more tenuous grouping whose members are scattered in a small number of isolated regions, most of them either in mountainous refuges or on the borders between larger families. These so-called Dene-Caucasian languages give every impression of being the remains of a formerly widespread language group that was overspread and largely replaced by Eurasiatic.



This Dene-Caucasian language region is marked in red on the adjoining map. There, you can see that the Basque language is the western-most representative of this ancient language group while others found east of the Black Sea in the Caucasus Mountains, in

Pakistan and in Siberia. Finally, at the eastern-most point in the range of Dene-Caucasian languages are those belonging to the modern Sino-Tibetan family, which includes Chinese, Tibetan, and Burmese.

Panshin suggests that there were two expansions of language across northern Eurasia during the Palaeolithic, one during the Aurignacian ~ 40 – 45 KYA, the other with the Gravettian around 29 KYA. When we look at the mtDNA of modern Europeans, we find that about 10% is attributable to an earlier migration and about 65% to a later one which, with some room for argument, more or less fits the Aurignacian–Gravettian hypothesis.

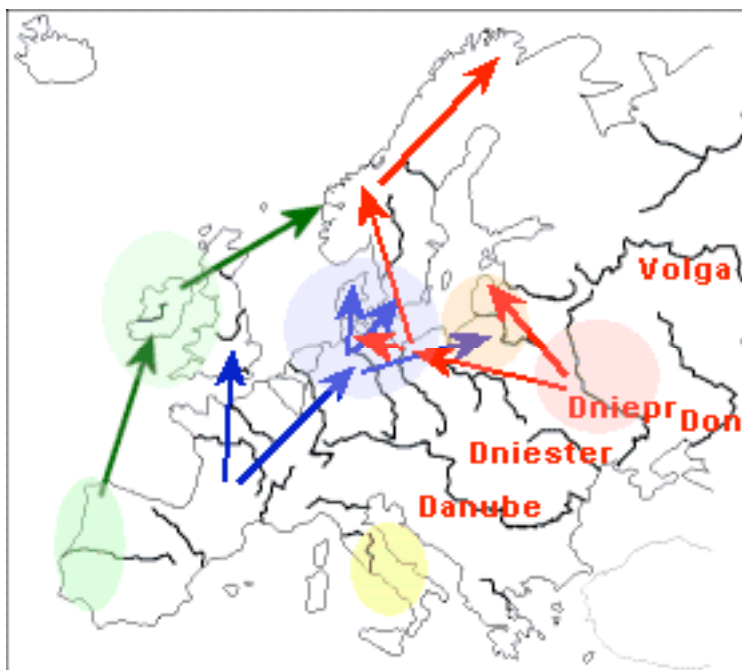
It is well worthwhile reading Panshin's essay in its entirety, not only because she gives such a lucid account of the spread of languages in the very distant past, but also because she ties this to the migrations we have been studying which started

when modern humans came out of Africa and took their various paths to the rest of the world. For example, she comments:

As they spread out, these migrants probably gave rise to the various language families that show some affinity to Dene-Caucasian. One such group is Eurasiatic, which is likely to have been spoken by those early dwellers on the Don. Another has been proposed to consist of Korean and Japanese. A third includes certain ancient languages of the northeastern tip of Siberia, along with Inuit, the language of the Eskimos.

The most distant member of this clan may be the vast language family which accounts for the majority of Native American languages. This family, which is said to have similarities to both Eurasiatic and Dene-Caucasian, is thought to have had a common ancestor about 40,000-30,000 years ago. Its most likely point of origin is near Lake Baikal, where certain modern peoples still display the same distinctive mix of DNA types as Native Americans

Back in Europe, the people who lived in the eastern refugia during the LGM retained their Gravettian culture (it is now called epi-Gravettian) but in the extreme west, two new cultures appeared. One of these — the Solutrean — began about 20 KYA and the other, the Magdalenian, about 18 KYA. While the Madgalenian is well-known for their wonderful cave art which we have already explored, the Solutrean remain relatively obscure even though they vastly improved the stone technology of their time and more importantly, probably learned to exploit the rich resources which the sea continued to provide while the land remained barren with the cold. The Solutreans are also thought to have made *currachs* — craft made from a wooden framework over which skins were stretched — and to have sailed them considerable distances. There is even a much-disputed suggestion that they might have reached the east coast of America and been responsible for the Clovis culture there.



During the Mesolithic, after the Ice retreated, the Magdalenians travelled north, hunting reindeer as they went. They reached Britain by about 14 KYA (the "land bridge" still existed then) as well as the Netherlands and Germany, reaching Denmark, southern Sweden, Poland and southern Lithuania within the next thousand years. A second push into Europe came from the epi-Gravettians who had taken refuge in the Ukraine refugia during the LGM and who now travelled northwest up the Dnieper River into Poland, Latvia and Lithuania, ultimately reaching northern Norway and Finland ~ 10,000 KYA. Today, the genetic divide between haplogroups from western and eastern Europe corresponds roughly with the border between Germany and Poland although of course the two blend into each other and the divide is not as precise as an Iron Curtain.

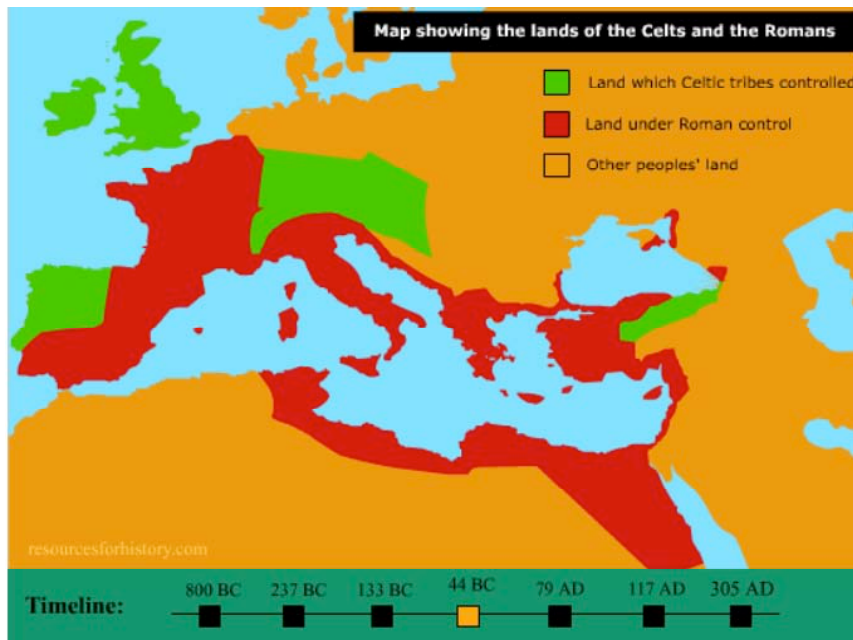
My trusty guide, Cory Panshin, makes a further and most significant point we have not really considered until now. She asserts that:

According to the DNA, there was just one other significant event in the repopulation of northern Europe, and that was the settlement of Ireland at the very end of the Ice Age by seafarers from northwestern Spain or Portugal (green arrows). These bold sailors might have been making regular stops at the unglaciated southern tip of Ireland for many thousands of years But it was only after the ice retreated fully and the land became green and inviting that they were able to put down roots and take up permanent residence around the shores of the Irish Sea.

This point is taken a step further when she adds:

However, information recently gained through DNA analysis not only weighs heavily against the old east-to-west scenario for the arrival of the Indo-European languages in their present locations but also offers a simple and persuasive alternative. This radical shift in perception hinges entirely on the history of the Celts.

There are presently three Indo-European languages families in western Europe — Italic, Germanic, and Celtic. Most of the region is dominated by Italic languages in the south (including Italian, French, Spanish, and Portuguese) and by Germanic languages in the north (including English, Dutch, German, and the Scandinavian languages.) The Celtic languages are confined to a marginal position out on the Atlantic fringe, — in Ireland, Scotland, Wales, Cornwall, and Brittany — and even there they are threatened with extinction.



Lands controlled by Celts and Romans c. 44 BC

Two thousand years ago, when Caesar was fighting his Gallic Wars, the scene was very different. Although the expansion of the Roman Empire had reduced the territories of the Celts — or Gauls as they were called in France — they still occupied vast areas of Europe, including the British Isles, north-western and western Iberia, parts of northern Italy and southern Germany, Austria, the Czech Republic, Romania and even in Anatolia on the far side of the Black Sea. Panshin makes the point, however, that:

Although Caesar could not have been aware of the fact, this situation of Celtic pre-eminence was relatively recent in his day, probably extending back no more than a thousand years or so, and it was destined to last for only a few centuries more. Much of it was the product of elite conquest, which may explain why it proved so vulnerable when it came under pressure from the Roman Empire to the south and the German barbarians to the north.

In the Unit called *The Nation which Never Was*, we will look at the Celts, their origins and their language, their expansion and eventually, their disappearance from the map of Europe. Because the Celts had a strange reluctance to write about themselves, most of what we know about them from their own point of view remains in the realms of pre-history. However, what we know about them from the viewpoint of their contemporaries, often their enemies, is well documented and so we are now well and truly into historical times.