

# G11: The False Spring

## The Death and Resurrection of Grass

WC 3578

In 1956, British author John Christopher wrote a science fiction novel called *The Death of Grass*<sup>1</sup> in which he described a post-apocalyptic world where a virus was killing off every blade of grass, causing massive famine engulfing the whole world. In this rather grim book, the narrator and his small family struggle to make their way across England, headed for his brother's potato farm. So desperate are they that on the way, they kill another family simply to steal their bread.

In its way, *Death of Grass* ranks with *Lord of the Flies* and *Mad Max* in its pessimistic view of human nature when our survival is threatened, but it also underlines a very important point: along with just about all other land-based animals on earth, in one way or another we are dependent upon grass but — essential or not — we take grass for granted: it is always there, all around us, providing food for us and for the animals we eat — except, that is, in times of drought.

When we talk — as we have been doing — about Ice Ages and the migrations undertaken by people to escape their harshest conditions, we focus on the cold but it is probably the lack of freely available water and consequent death of grass which prompted their movements long before the cold defeated them. Ice ages produce arid conditions — drought if you will — just as severe and perhaps more pervasive than prolonged heat. So, as the grass died, the animals moved away to pastures greener (if they could find them) and our ancestors had to follow.

But the reverse also applies: when the Ice began to melt, free water became available and in time, grass and other small, edible plants began to grow once more. Where there was grass, the game went and where the game went, our ancestors followed.... As in times past, they probably followed the river valleys but we have to remember, as the thaw increased, the rivers became raging torrents, gauging out huge gorges and sweeping everything away in their path until once more, the water, so long imprisoned in the Ice found its way back to the sea.

---

<sup>1</sup> Penguin 1958. Published as *No Blade Of Grass* in the USA.

## The Younger Dryas

However, the global warming and moistening of the Earth's climate which began at the end of the LGM proved to be a false spring. As had happened so often with interstadials in the past, it began rather suddenly about 12,900 ya and ended just as quickly at about 11,500 ya with a sudden cold snap known as the Younger Dryas or sometimes, simply as “The Big Freeze”. As we discussed briefly back in Unit 2, this new stadial takes its name from a wildflower *Dryas octopetala* which grows under the tundra and whose pollen is used by climatologists as one of their significant indicators.



*Dryas octopetala*

In all probability, it took less than a hundred years for the Younger Dryas once more to clasp much of the world in an icy grip, although most likely the effects were not as widely distributed as they had been during the LGM. Then, after about 1300 years or thereabouts — according to the Greenland ice cores — in a space as short as 20 – 70 years

conditions changed once again and the earth became as warm as it is today. One study even shows that about half of the warming took place in less than 15 years so that people living when this happened would have experienced massive climate change in their own lifetimes. To put this cold period into perspective, imagine if our own global warming were the end of a Younger Dryas: it would have begun at about the time the Romans were leaving Britain so that much of what we hold dear in our own civilisation would probably have never happened!

Significantly, the end of the Younger Dryas about 11,500 ya marks the end of the Pleistocene and the beginning of a new epoch, the Holocene in which we are now living. The relative stability of the Holocene and the warm, moist climate over much of the earth has made possible the change from the nomadic hunter-fisher-gather lifestyle of the Pleistocene to the settled existence of the Neolithic, the widespread adoption of agriculture, the domestication of some animal species and along with this more sedentary lifestyle, the use of ceramics. The climate of the Holocene has also made possible the horrendous expansion of human populations and associated extinction of other animal species....

Climate warming, albeit interrupted by the Younger Dryas, resulted in the melting of the massive ice-caps and glaciers and this had two major effects. First,

in some places the land rebounded after being depressed for so long under the weight of Ice above it so what had once been desirable sea-side territory ended up miles inland. The other and probably more significant effect was the rise in sea levels as the melt-waters fed into the oceans, submerging much of the coastal lands on which people had been living. This is what happened to *Doggerland*...

## Doggerland<sup>2</sup>



*Doggerland: the lost land 'bridge'*

Every so often people explain that the ancestors of the British walked there while sea levels were low and a "land bridge" existed. I always imagined this to be something like the narrow causeway which links Mt Saint Michel to mainland France. Instead it was a *...wide undulating plain containing a complex meandering river system, with associated channels and lakes*<sup>3</sup> with a mountain in the middle and which stretched from Scotland to Denmark. It existed while sea levels were low during the LGM but had disappeared beneath the North Sea by ~7,500 years ago. Although it was the melting Ice and water run-off which was primarily responsible for the submersion of this lost Atlantis, it was the catastrophic underwater landslide and subsequent tsunami called the **Storegga Slide** which caused the most dramatic (indeed, traumatic) flooding of the region. There are various theories as to what caused it but two phenomena are mostly

---

<sup>2</sup> Thus named by the archaeological team at Exeter University investigating the underwater area:  
<http://sogaer.exeter.ac.uk/archaeology/research/rdoggerland.shtml>

<sup>3</sup>Weninger, B. et al: "The catastrophic final flooding of Doggerland by the Storegga Slide tsunami", *Documenta Praehistorica* XXXV (2008)

held responsible: a huge bubble of gas escaping beneath the sea bed and the rising of the land mass of Norway and Sweden as the weight of the Ice was lifted from it. Although scientists believe there have been two previous underwater landslides in the region, the Holocene event happened around 8,200 years ago off the Norwegian coast when Palaeolithic sediments<sup>4</sup> the size of Iceland slid down into a marine valley. This caused the water level to drop 20 or so meters,



the water being sucked a long way off-shore before the mega-tsunami rushed back inshore. This must have been as devastating to the local inhabitants as the final flooding of the Black Sea was to the people who lived there when the Mediterranean broke its way through about 5,600 BC<sup>5</sup>.

*The Holocene Storegga Slide showing points of impact by the Tsunami<sup>6</sup>*

While we tend to think of Doggerland as a means of getting from Continental Europe to Britain, during the Mesolithic it was home to many people for whom the grassy plains probably meant good living. For years, modern fishing boats operating off the Dogger Banks<sup>7</sup> have been finding the kind of artefacts

associated with Mesolithic hunting/gathering society. More recently, Dr Briony Coles and her team of archaeologists from the University of Exeter have been exploring this underwater site and have been able to establish this lost world was once home to a thriving Mesolithic peoples who were either lost when Doggerland was submerged (and certainly when the tsunami struck) or who moved ahead of the advancing waters, retreating to what is now the coast of Britain or that stretch of coast between the Netherlands and Denmark.

Geneticists too are showing an increased interest in this lost world. For genetic genealogy it is not so much a “bridge” but the lost centre of a genetic journey

<sup>4</sup> <http://www.geos.ed.ac.uk/homes/s0456225/Storegga.html>

<sup>5</sup> See Wikipedia [http://en.wikipedia.org/wiki/Black\\_Sea\\_deluge\\_theory](http://en.wikipedia.org/wiki/Black_Sea_deluge_theory)

<sup>6</sup> [www.benfieldhrc.org/activities/events/tsunami\\_workshop/pres/david.smith.pdf](http://www.benfieldhrc.org/activities/events/tsunami_workshop/pres/david.smith.pdf)

<sup>7</sup> “Dogger” comes from an old Dutch word for “cod” or the boats used to hunt them.

from what was once called “Friesland” to the east coast of Britain. Genetic markers identical to each other are showing up in men on both sides of the North Sea where Doggerland was once the domain of their remote ancestors.

## Environmental Changes

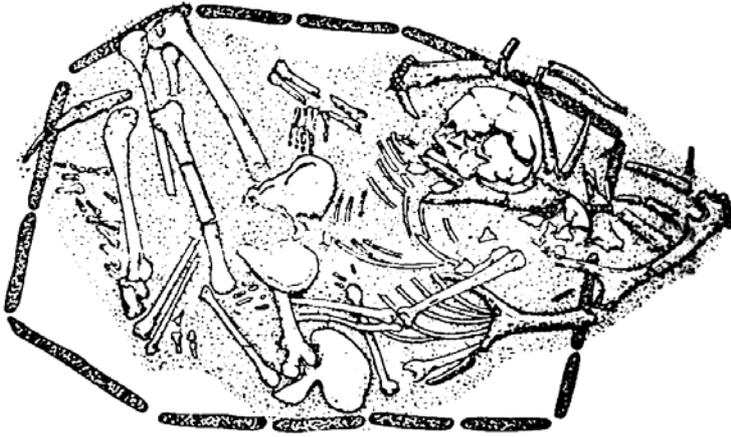
The flooding and sinking of Doggerland was not the only major change which followed the end of the LGM and the Younger Dryas. Most noticeable perhaps for the “man on the ground” was the change in plant and animal communities brought about by the warmer climatic conditions. Although we tend to focus on the huge ice-caps, far more of Europe had been reduced to sparse tundra or ice deserts. By 8000 BC, however, much of Europe was covered by dense woodland. Although the kind of trees and other vegetation varied from place to place, one very important and wide-spread immigrant to the once-frozen wasteland was the hazel tree (*Corylus avellana*). Archaeologists have found evidence that hazelnuts were systematically harvested and roasted in most Mesolithic settlements (as they have been ever since) suggesting these nutritious nuts were a seasonal staple in most ancient communities.



*Hazel and hazelnuts (Corylus avellana)*

There were changes too in the animals which now inhabited the forests: the cold-adapted species, such as the reindeer, which had lived on the tundra were replaced with more temperate climate animals such as the roe deer, wild boar and beavers.

However, it is on the sea-shores that we see the most obvious remainders of our remote ancestors diet because they left behind huge mounds of shells, mostly of the limpets and cockles on which they dined with gusto when the seasons were right. These are known as *shell middens*, although they often included the remains of other food-stuffs including fish and the ubiquitous hazelnuts. Archaeologists use these remains not only to analyse the diet of the people who tossed the shells aside but also, by various means to cast light on when the sea-side camp-sites were occupied. For example, shells contain growth lines much like the growth rings in trees which, in this case, show whether they were collected in summer or winter. Further, there is a small bone in the ear of fish,



the *otolith*, from which scientists can estimate the age of the fish when caught and from that deduce the season of the year.

*Maglemosian burial of Téviec at Morbihan, Brittany (Wikipedia public domain).*

Shell middens not only provide evidence of what our remote ancestors were eating all those

years ago on the sea-shore: shell middens also often reveal bodies because it was fairly common (as among the Jomon in far-away Japan) to bury the dead in the gigantic piles of shells. Of these burials, one in particular sounds a jarring note in this otherwise Acadian landscape. In such a midden at Téviec, on an island off the coast of Brittany, archaeologists found the skeleton of a young man who has an arrowhead buried in his spine. Whether he was shot in the back while fleeing from enemies or, for some other reason, he was killed in this way we will never know, but scientists have suggested that this, and other examples of violence found in other parts of Europe, mark the beginning of human warfare in this part of the world.

So, when we are talking of the Mesolithic we are no longer talking of cold and windy, Arctic conditions but of a warm and pleasant land over which small bands of nomadic and semi-nomadic people hunted and foraged with superior weapons, including the bow and arrow for the first time, and increasingly took control of their own food supply. They were able to do this because the climate was so amiable: Greenland ice cores indicate that temperatures in the Holocene reached their maximum between 6600 BC and 2,300 BC during which time temperatures were anything up to 2° C higher than they are today.

## Europe in the Mesolithic

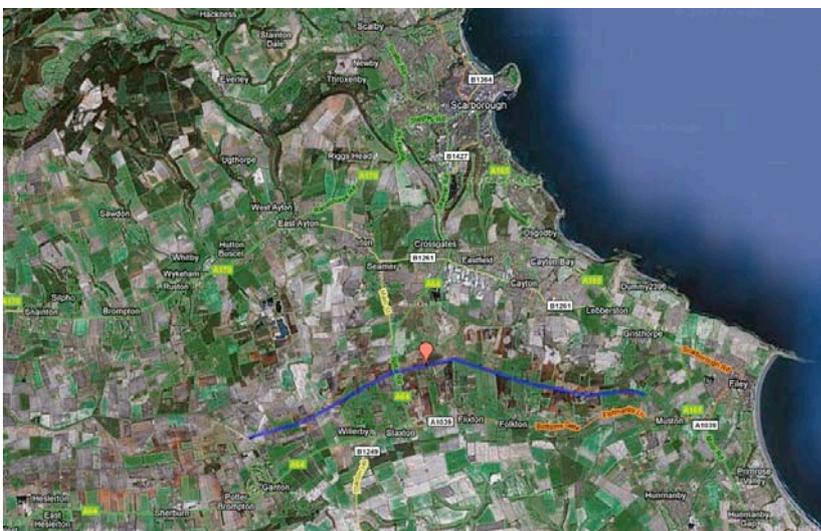
It was our old friend, John Lubbock who coined the term *mesolithic* in his book “*Pre-historic Times*” published in 1865. However it did not become popular until the Australian archaeologist V. Gordon Childe used it extensively in his “*The Dawn of Europe*” in 1947. Unfortunately, these days the term has several meanings. Literally, it means “middle stone age” but there is also an African Palaeolithic culture known by that name. Mesolithic also means a stage somewhere between the technological capacity of the Palaeolithic and the more sophisticated Neolithic or “New Stone Age”. Put simply, whereas the older culture chipped or knapped flints to make their tools, in the Neolithic, they ground their axes and adzes, scrapers and burins to hone an edge on them. We

are familiar here in the ACT with the grooves left by Aboriginals grinding their stone axes into shape.

Of course, archaeologists have even more meanings up their sleeve: these days there is a schism between those who categorise as *mesolithic* those who are beginning to show early signs of some of the features of the Neolithic. These signs might include burning grasses or reeds to encourage game to come there to eat the lush, new growth which follows. Some people also collected and scattered seeds, apparently in order to enhance their food supply in the next season. Some even used dogs to keep wild animals within a convenient range so hunters did not have to travel too far.

Some archaeologists call this phase *Epi-paleolithic* rather than *Mesolithic*, and just to make things even more confusing, some actually use these terms *vice versa*.... My own personal preference is to use *Mesolithic* to describe those human cultures in Europe which, after the end of the Pleistocene about 11,500 ya developed some aspects of agriculture and the domestication of animals and who, in some places led a more sedentary life while not yet settling down in one place as they would later in the Neolithic.

Although Lubbock drew attention to this phase of our ancestors' history, the *Mesolithic* has not been a popular area of study for archaeologists and pre-historians until relatively recently, most apparently preferring to study the "more advanced" or "civilised" Neolithic. Now, however, it has become fashionable and we know a lot more. One thing we have to realise however is that *Mesolithic* includes a very mixed bag of styles and types, not so much of stone technologies as the name might imply, but of hunting techniques, varieties of food, rituals and artistic expressions and degrees to which people became settled or maintained their old migratory habits.



## Star Carr in Yorkshire

We don't have time to look at the many and varied mesolithic cultures of ancient Europe so we will take a closer look at just one, Star Carr, which is located about 5 miles south of Scarborough in Yorkshire. At the time of its Mesolithic occupation,

Doggerland was still above the waves and the actual sea coast was some 10 or 12 kms distant. The “camp” itself was situated on a flat, peaty ground on the



shores of a large lake. This is known as a “type site” for the early Mesolithic *Maglemosian* culture and was occupied from around 8770 BC to 8580 BC. Like so many ancient sites discovered in recent times as a result of industrial or construction works, Star Carr was found during the excavation of a field drain in 1947.

*Star Carr excavation 2006<sup>8</sup>*

The initial excavation carried out by Sir Grahame Clark between 1949 and 1951 revealed large numbers of “finds”, including stone, bone and antler artefacts, all concentrated in an area of about 200 square meters on the shore of what had been the ancient lake. Clark suggested that the site had been occupied repeatedly by a small number of people, probably no more than 20 or 25, who were most likely members of only four or five families. These families seem to have been engaged in a kind of industrial activity, creating splinters of red deer antler which were then incorporated into multi-barbed spear points.

*Star Carr “Headdress” of re-worked deer skull*

Clark also found hafted “mattock heads”, a kind of implement fairly common in Mesolithic times. These were made from the antlers of the European elk which were, of course, larger than the antlers of the red deer. There were also bone pins, wedges, scrapers and very significantly, 21 “headdresses” as Clark called these re-worked deer skulls with the antlers still attached. These were perforated so that they could be worn perhaps as part of



<sup>8</sup> <http://www.york.ac.uk/depts/arch/Projects/StarCarrWebsite/fotos.htm>

ritual activities. Along with these artefacts there were also large numbers of flint microliths, flint scrapers, burins, awls and other flint axes and adzes. Last, but not least, there were 30 or so beads made from perforated shale, a pendant made from North Sea amber, and what was apparently part of a wooden paddle. Other remains included those of red and roe deer, aurochs, wild pig, some birds, elk and of a domesticated dog. Surprisingly, there were no remains of fish.

Later excavation in 1988 indicated that the vast collection of unshed red deer antlers was probably the raw materials brought there from elsewhere to be made into tools and other artefacts. It is not clear if this was a small summer camp occupied mostly by men who re-worked the antlers during the summer months and later returned to home territories, possibly on the sea shore, or as a more general “base camp” used as both an industrial and ritual centre.

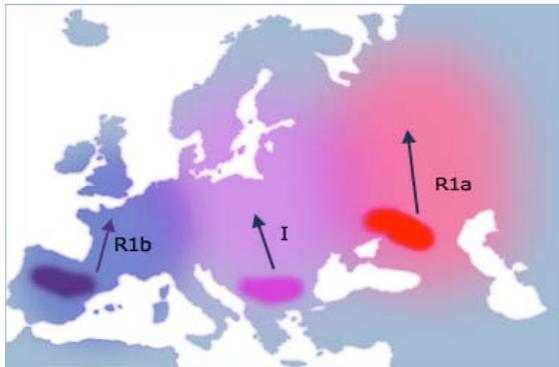
This later re-investigation literally unearthed what might be the earliest example of carpentry in Europe, the remains of some kind of trackway built of split trunks of aspen trees, extending from what would have been dry land out into the marshy edges of the lake. There is also evidence of repeated burning of the reeds surrounding the lake shore at this point but whether this was to clear the access to the water or possibly to attract animals to the lush re-growth, cannot be told.

Although later “digs” have shown that there were many similar camps along what would have been the lake shore, but none of these have been as rich as Star Carr. Similar finds of the same vintage have been discovered in Denmark, southern Sweden and Northern Germany which along with Star Carr are grouped together as proto-Maglemosian sites. Although Doggerland eventually disappeared under the North Sea, it is reasonable to presume that the people who occupied that once fertile, grassy plain lived lives similar to these others for whom we have the artefacts they left us, and having found them, to deduce as best we can how these remote ancestors lived. Star Carr is not only the “classic” proto-Maglemosian site but because of the huge variety of its treasures, it is regarded as one of the most important Mesolithic sites in Europe.

## Where did the Mesolithic tribes come from?

It is generally believed that the many Mesolithic peoples who roamed Europe after the Younger Dryas had their origins in the refugia of southern France and Northern Iberia. But who exactly were those residents of the refugia during the LGM? This has recently become a major issue in genetic genealogy and the associated disciplines and is likely to remain so for some time to come. Of the three major refugia, it is generally believed that it was the Franco-Cantabrian which seems to have contributed most to the re-population of the Atlantic seaboard of Western Europe and it is therefore the one on which we will concentrate most for the moment.

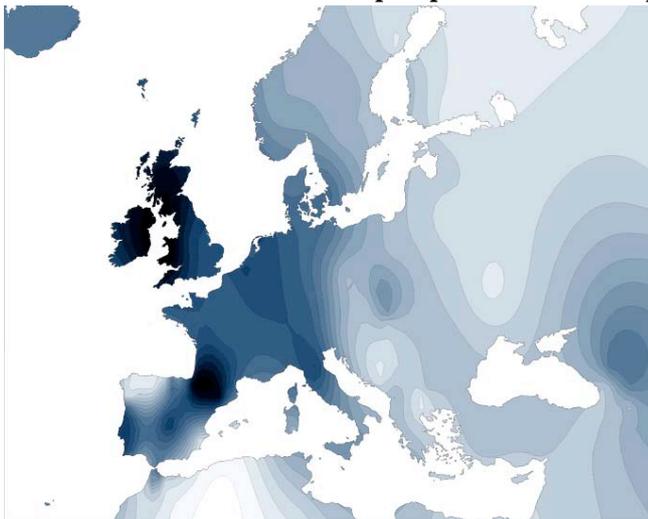
When I first began to take an interest in genetic genealogy, the re-expansion after the LGM all seemed fairly straightforward, albeit sketchy and lacking in detail. Fundamental to what we thought we knew was that the first men in Europe belonged to yHaplogroup R1b, the marker of the Aurignacian culture. Later the Gravettian people, most of whom were probably Haplogroup I, and



other cultures, including the beach-combing Solutrians, arrived as Europe plunged the LGM. So these were the people who found their way into the Franco-Cantabrian refugia and sojourned there during the long, long winter.

*Expansion from the three refugia 12 kya<sup>9</sup>*

Then, as the Ice withdrew, people began to emerge from their refuges and moved once more into the lands to their north. Some probably returned to the refugia when the Younger Dryas once more plunged Europe into the freezer, but it also seems some managed to eke out an existence, albeit Arctic, in the new territories until once more the warmer days. So there were basically two waves of immigrants into northern Europe after the LGM, those who ventured forth at the end of the Paleolithic and the post-Younger Dryas pioneers who followed them. Thus we expected that by the Mesolithic, Europe was populated by men belonging to Haplogroups R1b and I, and because R1b had constituted the greater population before the LGM, it was assumed this was why in later eras, R1b would become the preponderant haplogroup of the Atlantic seaboard.



*Distribution of R1b in Europe*

By 2008, a lot of research has been done on the basis of those assumptions as a result of which two best sellers in genetic genealogy were published. One was *Blood of the Isles*<sup>10</sup> by Bryan Sykes, the other *The Origins of the British*<sup>11</sup> by Stephen Oppenheimer. Both attempted to

<sup>9</sup> from early DNA-Heritage Masterclass

<sup>10</sup> Sykes, B: *Blood of the Isles*, Bantam Press 2006

<sup>11</sup> Oppenheimer, S: *The Origins of the British – A Genetic Detective Story: The Surprising Roots of the English, Irish, Scottish, and Welsh*; Carrol and Graf, NY. 2006.

describe the origins of the many different peoples who have populated the British Isles, but — as we will see — despite the iconic status they achieved, both are now known to rest on shaky foundations.

---