

Insight: Time and Place

Ramblings Through History, Archaeology and the History of Early Christianity

Posted by: **Galghaidhil** | December 19, 2009

Global Warming Arguments?

With so much in the news these days about global warming, I think this link (<http://www.lewrockwell.com/spl/climategate-video.html> (<http://www.lewrockwell.com/spl/climategate-video.html>), and the charts it will take you to) will provide a perspective on the current cycle of global warming, in context of geological and climatological data extracted from ice cores.

Viewed in context of a much longer-term perspective on climatic data from ice core samples, the warming hockey stick effect that the earth is undergoing becomes much flatter, less impactful, and less dramatic than earlier, much more severe periods of warming that have occurred with nearly regular frequency during the earth's history – the most recent being the Medieval Warm Period roughly 1000 years ago.

In fact, when I was doing archaeological research on a Viking-period farm in the Southern Uplands of southwest Scotland near the village of Moniaive in the 1970s, which had been occupied from roughly AD 975 – AD 1150, one could see clear evidence that the climate was deteriorating over the life of the settlements, becoming wetter and cooler as time passed. The changes were evidenced by the presence of more and more drains being put in, which had not been needed when the five adjacent farmsteads had been originally settled, but which became necessary to provide proper drainage as the climate shifted, becoming wetter. Upland farming at these altitudes occurred (and was only possible) during the Medieval Warm Period, which lasted from AD 800 – AD 1300.

The farms were abandoned by 1150, although at least one farm remained in the glen, which is marked on the first map of that part of Scotland (late 1500s) as "Craiglirian Farm", although it was located nearly $\frac{3}{4}$ mile down the glen towards Moniaive where it was warm enough to support a minor hay crop each year for the farm's cattle. Present day Craiglearn Farm (structure built in the 1880s) is located on or very close to the position indicated for the farm on the late 1500s map.

The main medieval road from Dumfries to the northwest across the Southern Uplands, went up the glen where the Craiglearn farm sites were located, passing just beyond and above them on the north slope of the glen. The road skirted a bog at the head of the glen whose origins dated back to the end of the last glaciation (approximately 10,000 – 12,000 years ago in this area). The Viking-period farmsteads were located on relatively level ground along the sides of the bog and also just below it (slightly down the glen), with the fields occupying the less steep slopes adjacent to the farmsteads. Because of the depth of the bog (approximately 10 meters), accurate carbon dating and pollen samples could be taken, which showed the range of climatic vacillation from the time of the end of the last glaciation to the present.

The glen contained Bronze Age and Iron Age sites, which pre-dated the Viking-period farmsteads

(which were Hiberno-Norse or “Galghaidhil” settlements most likely, evidenced by primary buildings having outcurving side walls, constructed of drystone foundations and lower walls, probably with turf upper walls and thatched roofs – similar to the so-called “Black Houses” of the Outer Hebrides and Orkney that date in the cultural origin to the Viking period) by several thousand years, but which had no evidence for agriculture. Presumably the growing season was too cool and too short during those times to allow cropping at that altitude.



(https://galghaidhil.files.wordpress.com/2009/12/clip_image002.jpg)

Unfortunately, the sites were largely destroyed a few years ago, when an afforestation project was undertaken in the glen, which impacted most of the south side of the stream running out of the bog and down the center of the glen.

However, as the climatic optimum (i.e., the Medieval Warm Period) ramped up in Northern Europe, upland farming at sites like Craiglearn became possible; the Viking-period farmsteads’ in-fields were divided from their outfields by drystone walls composed of monolithic boulders; the same type of walls were also used to separate one field from another. Modern drystone walls are constructed much differently and never use monolithic stones in their construction.

Evidence of early ridge-and-furrow agriculture was in evidence in the enclosed fields. The ridges of the ridge-and-furrow pattern were distinctively different in width and height from later medieval ploughed fields (the former being broader and shorter, the latter being narrower and taller) that can be seen in low angle light at other places in the district (but not in Craiglearn Glen). It was not possible to determine what, specifically, was being cropped in the various fields, although a preliminary pollen analysis indicated the presence of cereal grains (probably rye) during the period of occupation of the five Viking-period farms.

As time went on through the 11th / 12th centuries, the climate changed and the climatic optimum gave way over the next several hundred years to what became known as the Little Ice Age (mid-1600s – late 1800s).

Here’s a relatively recent photo of the upper glen taken from Craiglirian Craig, which sits several hundred feet above where the Viking-period farms were located.

The view in the photo is to the northwest, up the glen in the direction of Ayrshire. The sites were located just out of the photo down the hill to the right. The forests were not there when the sites were excavated in the 1970s. Unfortunately, the deep ploughing required for afforestation has destroyed most of the sites of the Viking-period farms, as well as the Bronze Age cairn field and Iron Age platform settlement in Craiglearn Glen.

The road running along the forest edge in the photo is also new and follows, more-or-less, the general course of the medieval road. The post-Pleistocene bog was, unfortunately, drained to allow reforestation; regardless, farming in the Viking period was possible at and just above the level of the forest – it is now

impossible to raise crops at that altitude, due to the short growing season and the temperatures (too cold).



(https://galghaidhil.files.wordpress.com/2009/12/clip_image004.jpg)

Climate does, in fact, change, and although we do need to be – and should be – good stewards of the earth, the earth’s climate has shifted significantly for at least the past several million years and will continue to shift over time, growing warmer or colder, as a result of largely unknown mechanisms – and regardless of what mankind does or doesn’t do.

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