

THE HISTORY OF TIREE IN 100 OBJECTS - no. 26

THE CAMPBELL-STOKES HELIOGRAPH

'The island has a mild climate with some of the highest levels of sunshine recorded anywhere in the British Isles' - www.tiree.com

This must be one of the simplest, most beautiful objects in our archive, an elegant instrument invented by one of the greatest Gaelic scholars of the nineteenth century, and one who visited Tiree himself in 1871. It also sits at the heart of an important, and regularly repeated, Tiree myth: that the island is the sunniest place in Britain.

This is the Campbell-Stokes heliograph from the Tiree meteorological station, given to us when the station went automatic in 2000. It was invented by John Francis Campbell, *Iain Òg Ìle*, who was the Gaelic-speaking son of the Laird of Islay. Crippling family debts, however, forced his father to sell the estate, and he moved down south. Educated at Eton and Edinburgh University, he became secretary to the General Board of Health. While dealing with the famous London cholera outbreak of 1854 (where the disease was proved for the first time to infect people through contaminated water), he deployed his new sunshine device on London roofs to see if sunlight was also involved. The original device was a glass sphere filled with water inside a wooden bowl, the magnified rays burning a mark in the wood. It is in the Science Museum in London. So successful was the instrument, now with a solid glass sphere, that it was taken up by the newly established Meteorological Office. In 1879 the Cambridge physicist Sir George Gabriel Stokes designed a more elegant metal frame and substituted a heat sensitive recording paper for the wooden bowl. The device went on to become used world wide due to its simplicity, lack of moving parts and relative cheapness. Its disadvantage was its lack of sensitivity distinguishing hazy from bright sunshine. Today the Campbell-Stokes heliograph has been largely superseded by electronic meters.

John Francis Campbell may have been tied up in London much of his life, but he remained true to his cultural roots, collecting a huge number of traditional Gaelic stories published in four volumes of *Popular Tales of the West Highlands* from 1860 onwards. His collecting method has stood the test of time, being remarkably faithful to his sources. In 1871 he took the train from London and visited Tiree on a field trip, meeting the minister of Kirkapoll and fellow folklorist John Gregorson Campbell in the process. He wrote to his mother that 'We landed on a rough pier [at Scarinish]

and stumbled up somehow to the splendid Hotel where I am doing the usual thing, waiting.'

The first weather report from Tiree was sent on 16 September 1926 by the head teacher at the time D O MacLean from a small enclosure in the playground. Within a few years the records were attracting attention. An article in the *Meteorological Magazine* by J Crichton in 1933 reported that Tiree 'enjoys, during at least the months of April, May and June, as much sunshine as any part of the British Isles ... and that in a somewhat unexpected region.'

In fact, most of southern England enjoys more sunshine than Tiree, if you take the whole year into consideration. Tiree's average is around 1400 hours per year, while most of southern England has more than 1600. However, the common northeasterly winds of May bring cloud to the southeast of the country. The average in London at that time is 200 hours, while Tiree boasts 235 hours. The myth of our 'sunshine isle', however, has been a very useful marketing device - so please don't tell anyone!

Dr John Holliday