Bristol Naturalists' Society

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Wildlife News: Week 47 – November 25th 2007

Weather

When does winter begin? In meteorological terms this is still autumn and winter begins on December 1st and lasts until the end of February. This makes a lot of sense because the soil takes time to lose the warmth of summer, and the coldest days often come well after the shortest ones. But I have constructed an index which multiplies the number of minutes of daylight by the temperature, which gives an index of winter misery. The Index can reach 270 in summer, but in winter it dives down to below 50, and can stay there until the middle of March. It is useful in two ways, because it measures the sort of pressure that birds are under, as they need more food both the shorter the days are and the colder the temperature is, and in most winters their numbers mirror the index closely; but it also suggests the problem that plants face because they live off light, and cannot grow in darkness, but their speed of growth is controlled by temperature. As day-length shortens (we now have just over eight hours of light and sixteen of dark) so the opportunity of growth, whatever the temperature, lessens, and plants increasingly give up the struggle. On Monday 19th the index (the average weekly temperature multiplied by the average weekly day-light) reached 50 for the first time since February 7th, and has fallen since then, and for me winter has begun

The average temperature this week was 8.9C, below the recent average for this week, and with two frost nights, and the year to date fell to 15.1C. The last twelve months figure was still 14.6C, but last year the end of November was unusually warm, and it is very likely that in a day or so the last twelve months will have been colder than the previous one. It also suggests that by the year's end the annual average will be around or a little below 14.5C, just cooler than the average for the past decade, though warmer of course than the average since 1881 of 13.8C. The overall temperature for autumn will be about 14.7C, well above the long term average of 14.1C, but similar to recent autumns.

It has also been a wet week, with 33mm of rain falling, bringing the monthly total to 46mm, about half the average for the month. The autumn will be one of the 25 driest in the past 150 years, though total rainfall in the past twelve months is 1073mm, well above the normal level.

Plants surviving in flower.

In the past week I have found 52 species still in flower, out of the 122 which I have found since Nov 1st. 70 species have probably ceased to be in flower in the past three weeks. 32 species were still in flower on the Downs on Sunday, which is above the average for this week in the past five years of 24 species. There are some surprising species such as both Creeping and Meadow Buttercup, Rock Rose, Welsh Poppy, Tutsan, and Wild Wallflower which I last recorded in flower at this date in 2001. I still have not seen Winter Heliotrope in flower yet, though I suspect it must be.

Bare Trees. The stormy weather has stripped many trees of their leaves, but as usual Common Oaks, though turned, are still leafy, and Sessile Oaks are greener than Common Oaks, with Turkey Oak greener still. Walnut and Mulberry as well as Hazel still hold green leaves, and both Tulip Tree and Ginko, as well as a few Silver Birch are magnificent in golden glory.

BTO Atlas.

This continues to go well. Nationally 3.3 million birds have been recorded of 309 species, and 3000 tetrads surveyed by over 2000 observers. Locally of the 400 local tetrads we intend to cover 253 are already booked, and 72 have received their first visit. 129 species have been recorded in the region in the first three weeks.

The purpose of the Atlas is to describe national distribution and density and to compare it with the Winter Atlas of 1980 and the breeding Atlas of 1990. All records are valuable, and to find out how to help if you are not yet involved go to www.birdatlas.net and follow instructions

The Severn Barrage part 6 Economic impact and conclusions.

Costs. It is estimated that the Barrage would cost $15bn, over 15 years that its construction would take. This is similar to the cost of the Olympics, and less that the Northern Rock bailout. It would be 1p on income tax a year. The interest and pay back time would depend upon whether it was built by tax-payers money or commercially, and the price that was charged for the electricity generated. In theory it would operate for 120 years once built, so that in the long term it would pay for itself. Hence as an infrastructure project, like the Channel Tunnel, though there might be debt problems, it ought to generate enough revenue. Most of the costs would be labour- it would create a temporary demand for 40,000 jobs, and would require 200,000 man-years of labour. The actual operation of the barrage once complete would on the other hand be a simple matter requiring very little labour. Much of the caisson construction would probably take place in South Wales.

Economic benefits. These are harder to estimate. The price of the electricity generated would depend upon a variety of variables, including the cost of generation from alternative fuels; So far the aim has always been to generate electricity at the lowest possible price, because the whole of the economy depends on cheap power. However this has resulted in the grossly wasteful use of electricity, and hence huge carbon-dioxide emissions, and the only effective way to reduce them is to raise the price of power substantially. As both oil and gas prices are clearly going to rise hugely, and we have not invested yet in coal gasification plant which would enable us to use our own coal, the future should be a period of high electrical prices. There is a further cause of waste which is long-distance distribution, because power is wasted by resistance every mile it travels. In theory power should be consumed where it is produced, and the future should be based on micro-generation, not a centralised grid system. The Sustainable Development Commission concludes in part that a Barrage would be a part of the problem, because it would deliver cheap electricity over a central grid, rather than part of the solution.

Development possibilities. Some people have welcomed the idea of a barrage because, by reducing tidal range and hence tidal currents, it would create a huge basin similar in size to the Solent, and it has been suggested that it could house the same number of sailing boats, with all their associated marinas, and jobs, and housing. There is also the feeling that the reduced tidal range would enable development on land at present below high tide level without the risk of flooding that prevents development at present. Tourism associated with the barrage might increase, but the potential damage to existing beach resorts is considerable The Commission make absolutely clear that any such development would not, in their view, be sustainable, and cannot be an argument for the barrage.

Transport possibilities. It has been suggested that the barrage could carry both a rail and road link. The Commission dismiss both on the grounds that there is no demand for a further crossing, and if there were to be a ship lock the costs and practicality of both would not be jeopardised. There was even an idea that an airport could be combined with a barrage, but that would be a completely different project to anything considered by the Commission. Given the combination of currents, tidal range and depth of the estuary the costs would be phenomenal.

Conclusion. SDC believes that the existence of the barrage would help to sustain the era of centralised electrical supply and cheap fuel which is itself a major contributor to waste and excess CO2 emission. However there is a case to be made for a full investigation of a Severn Barrage as part of a Sustainable Energy package. Compliance with the Natura 2000 directive is a central condition of a sustainable scheme and much wider and stronger action on climate change is a pre-requisite for the SDC's support. There may be an 'environmental opportunity' available by linking a compensatory habitats package to climate change adaptation. A Severn Barrage must be publicly-led as a project and publicly-owned as an asset to ensure long-term sustainability. Government should consider a range of innovative financing mechanisms that would maintain overall public control and ownership of the project.

My conclusion is that there must be better ways of spending £15bn, and that a sustainable future lies with micro generation, and an end to both population and economic growth. The environmental damage the scheme would certainly cause, together with the very wide range of unknown and unknowable consequences, renders the scheme unsupportable.

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