

A Magical Moment

18 May 2015

James Hansen

As an antidote to my upcoming paper, I attach two photos taken by Caitlin Baird of butterflies in Ham Lake, Minnesota, forwarded to me on 13 May by one of my sisters. The photographer said the butterflies were there only briefly, but “it was like magic.”

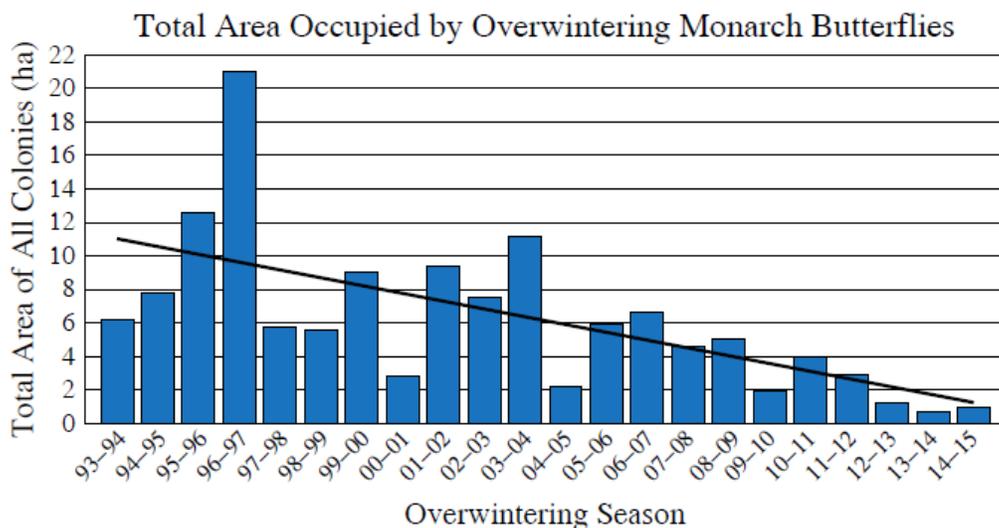
The photo resolution is not good enough to ensure that these are not Monarch imposters – a number of the latter have evolved, because looking like a Monarch is an effective way to discourage birds from taking a bite – the milkweed in Monarchs makes them poisonous.

I have not seen Monarchs traveling in a swarm, but perhaps that happens on the northward trip, given that they had congregated for the winter. The map showing migration progress this spring (https://www.learner.org/jnorth/monarch/spring2015/compare_adult051615.html) does not have Monarchs so far north as Ham Lake at that time, but reasonably close. We have not seen any as yet at our place in Pennsylvania, but we will be on the lookout this week.

If the number coming up the East Coast is as meager as the past two years, but the number going via the Midwest increases, it raises a question: what detail is passed on via their DNA from one generation to another? Do offspring follow the same path as prior generations the year before?

The good news is that the number of Monarchs reaching the wintering site in Mexico was about 50% larger this past winter than in the previous winter – see graph below. That’s the second smallest amount since records began a few decades ago, but the significant increase tends to disprove concern that the number had fallen below a level foretelling eventual extinction.

Although humanity has made progress in raising many people out of poverty in the past century, if we are so foolish as to allow the ice sheets to go unstable the social disruption and economic consequences of multi-meter sea level rise could be devastating. It is not too difficult to imagine that conflicts arising from forced migrations and economic collapse might make the planet practically ungovernable, threatening the fabric of civilization. It would be ironic, but not too surprising, if, after all, the Monarch outlasted the species that threatened its existence.



There are about 50 million Monarchs per hectare when they cluster together to hibernate, so the estimated population this past winter was 55-60 million.

