

Human-induced Climate Change and People and Birds and Other Things

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The YVAS November chapter meeting will present some weather science and facts from National Oceanic and Aerospace Administration (NOAA) personnel located in Billings and will include some science and facts about effects of climate changes on birds. Forthcoming YVAS chapter meetings, issues of the Flyer, and YVAS website news will include further information, references, and discussion about climate change and its effects.

Like you, I am very concerned about the reality of the climate change crisis. I read articles, some books, and view some videos about this crisis and about what we humans can, and must, do to repair this crisis situation. In this article are some references* and information that you may or may not have seen with regard to climate change and climate effects on birds.

Among many other publications about climate change, the International Panel on Climate Change (IPCC) has published its report “Climate Change 2014: Impacts, Adaptation, and Vulnerability”. The IPCC is a scientific intergovernmental body under the auspices of the United Nations, set up at the request of member governments. It was first established in 1988 by two United Nations organizations, the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) and later endorsed by the United Nations General Assembly through Resolution 43/53.

That 2014 IPCC report said *“Human interference with the climate system is occurring. Climate change poses risks for human and natural systems. The assessment of impacts, adaptation, and vulnerability in the ... IPCC’s Fifth Assessment Report ... evaluates how patterns of risks and potential benefits are shifting due to climate change and how risks can be reduced through mitigation and adaptation. It recognizes that risks of climate change will vary across regions and populations, through space and time, dependent on myriad factors including the extent of mitigation and adaptation.”*

Regarding North America specifically, the IPCC report states:

“Chapter 26 Executive Summary, Overview:

North America’s climate has changed and some societally relevant changes have been attributed to anthropogenic causes (very high confidence). Recent climate changes and individual extreme events demonstrate both impacts of climate-related stresses and vulnerabilities of exposed systems (very high confidence). Observed climate trends in North America include an increased occurrence of severe hot weather events over much of the USA, decreases in frost days, and increases in heavy precipitation over much of North America (high confidence). The attribution of observed changes to anthropogenic causes has been established for some climate and physical systems (e.g., earlier peak flow of snowmelt runoff and declines in the amount of water stored in spring snowpack in snow-dominated streams and areas of western USA and Canada (very high confidence). Evidence of anthropogenic climatic influence on ecosystems, agriculture, water resources, infrastructure, and urban and rural settlements is less clearly established, though, in many areas, these sectors exhibit substantial sensitivity to climate variability (high confidence).

Many climate stresses that carry risk—particularly related to severe heat, heavy precipitation, and declining snowpack—will increase in frequency and/or severity in North America in the next decades (very high confidence).

North American ecosystems are under increasing stress from rising temperatures, carbon dioxide (CO₂) concentrations, and sea levels, and are particularly vulnerable to climate extremes (very high confidence).

Water resources are already stressed in many parts of North America due to non-climate change anthropogenic forces, and are expected to become further stressed due to climate change (high confidence).

Effects of temperature and climate variability on yields of major crops have been observed (high confidence). Projected increases in temperature, reductions in precipitation in some regions, and increased frequency of extreme events would result in net productivity declines in major North American crops by the end of the 21st century without adaptation, although the rate of decline varies by model and scenario, and some regions, particularly in the north, may benefit (very high confidence).

Human health impacts from extreme climate events have been observed, although climate change-related trends and attribution have not been confirmed to date.

Observed impacts on livelihoods, economic activities, infrastructure, and access to services in North American urban and rural settlements have been attributed to SLR (sea level rise), changes in temperature and precipitation, and occurrences of such extreme events as heat waves, droughts, and storms (high confidence).

Much of North American infrastructure is currently vulnerable to extreme weather events and, unless investments are made to strengthen them, would be more vulnerable to climate change (medium confidence).

Most sectors of the North American economy have been affected by and have responded to extreme weather, including hurricanes, flooding, and intense rainfall (high confidence)."

Not good news for humans or other living things, or for our planet. Life is persistent and dynamic and will adjust to human caused messes. The adjustments are largely unpredictable and many are likely to be very, very undesirable. Putting our world and living things through all that because of human negligence can be described in many ways – irresponsible, unnecessary, unjust, dangerous, sacrilegious, and just plain stupid, to name a few of those 'ways'.

There are some things we can do to minimize continued human induced climate change and to relieve some of this impact. Many individuals and groups across the planet are, and have been, striving to do those things and to get others to do them too. For the past two decades, IPCC's Working Group II has developed assessments of climate change impacts, adaptation, and vulnerability. You might want to check out these findings and the overall IPCC report at: <http://www.ipcc.ch/report/ar5/wg2/>

There are a considerable and disturbing number of politicians, corporate spokespersons, and others that espouse or pretend that climate change as influenced by humans is hogwash. They seem

to think they know more than the countless scientists and other experts that actually develop and study hard data and draw verifiable, solid science-based conclusions.

Not all of us however ignore facts nor pretend that we know more than the vast majority of learned scientists, researchers, and real experts. Most people, I hope, will ignore the naysayer's argument against human induced climate change. Such naysayer denial and argument is a disastrous argument for the sake of argument, for the sake a buck, for illogical reason, etc.

There is a lot of incorrect, misleading, misinterpreted, and baseless information 'out there'. There are also a lot of accurate, verifiable, and inescapably important facts 'out there'. Some folks try hard to get at the facts, some try hard to ignore them.

Please visit the YVAS website <http://www.yvaudubon.org> over the coming months. YVAS and the Flyer newsletter will continue to provide further opportunities to study and get involved in human-induced climate change news and facts, ways to relieve some of the impacts, and summaries of this ongoing crisis.

***Some references to Human-induced Climate Change and People and Birds and Other Things:**

A short visual picture of climate change 1950 – thru 2012:

<http://www.upworthy.com/everything-you-need-to-see-to-convince-you-that-climate-change-is-happening-in-14-seconds>

Bill Nye the Science Guy summarizes climate change:

<http://www.upworthy.com/bill-nye-is-too-busy-saving-the-world-to-say-i-told-you-so>

Charlie Rose interview: Global Warming its Effects - with Michael Oppenheimer, Princeton U; Jeffery Sachs, Director of the Earth Institute; Michael Mann, Penn State U. :

<http://www.charlierose.com/watch/60367932>

National Audubon Society - Birds and climate change:

https://www.youtube.com/watch?v=aN2-a82_3mg

A short film by Inga Sieg- How does climate change affect animals?:

<https://www.youtube.com/watch?v=9h7P8gWpolQ>

Defenders of Wildlife- Songbirds and climate change:

<https://www.youtube.com/watch?v=SFMqd1s8L6E>

Cornell Lab of Ornithology – Nest monitoring citizen science and climate change:

https://www.youtube.com/watch?v=feujo_w9IR4

Morgan Freeman and Climate Change:

<http://www.upworthy.com/morgan-freeman-needs-just-62-seconds-to-inspire-all-of-us-about-the-future-of-our-planet?c=hpstream>

A good book summarizing climate change science and findings:

With Speed and Violence: Why scientists fear tipping points in climate change by Fred Pearce, 2008 - ISBN 0-8070-8577-4