

# The Week That Was: 2019-06-29 (June 29, 2019)

## Brought to You by SEPP ([www.SEPP.org](http://www.SEPP.org))

### The Science and Environmental Policy Project

**Quote of the Week:** *'for the purpose of promoting scientific inquiry'* — Cambridge Philosophical Society – See Article # 2

**Number of the Week:** 2.34 mmb/d

---

#### **THIS WEEK:**

**By Ken Haapala, President, Science and Environmental Policy Project (SEPP)**

**0.04% NOT 0.4%:** Last week's TWTW contained a significant typo, which was caught by a number of readers. The current concentration of carbon dioxide (CO<sub>2</sub>) in the atmosphere is approximately 0.04%, not 0.4% as erroneously stated. This is based on measurements made at Mauna Loa, an observatory at 3402 m, or 11,200 feet above sea level on the island of Hawaii (the Big Island). The actual average for May was 414.7 parts per million (ppm). It declines as the summer season takes hold in the Northern Hemisphere and plants use photosynthesis to create food and oxygen from CO<sub>2</sub> and water. In May 2018, the average was 411.2 ppm. TWTW appreciates those who corrected the typo and regrets any confusion the typo may have caused.

\*\*\*\*\*

**The Greenhouse Effect – Molecular Spectroscopy:** Also last week, using plain English, TWTW tried to explain a complex concept in physics to illustrate that the greenhouse effect is not simple physics, as erroneously claimed by many politicians and climate activists, including magazines considered “scientific.” The explanation was based on an interview of William van Wijngaarden, a professor of physics at York University in Canada, and an unpublished highly technical paper written by van Wijngaarden and Will Happer, which SEPP has reviewed.

In physics, the concept discussed is called molecular spectroscopy:

*“Spectroscopy generally is defined as the area of science concerned with the absorption, emission, and scattering of electromagnetic radiation by atoms and molecules, which may be in the gas, liquid, or solid phase. Visible electromagnetic radiation is called light, although the terms light, radiation, and electromagnetic radiation can be used interchangeably. Spectroscopy played a key role in the development of quantum mechanics and is essential to understanding molecular properties and the results of spectroscopic experiments. It is used as a ‘stepping-stone’ to take us to the concepts of quantum mechanics and the quantum mechanical description of molecular properties in order to make the discussion more concrete and less abstract and mathematical.”*

Specifically, molecular spectroscopy involves the absorption and emission of electromagnetic photons by molecules. In the high atmosphere (at low pressure) molecules exhibit absorption in narrow lines, in regions of the spectrum called spectral bands; they are characteristic of the molecule as well as the temperature and pressure of its environment. In the lower atmosphere, where the pressure and temperature are higher, the spectral peaks broaden, and the spectral bands have no gaps between the lines.

Photons may be emitted anytime molecules are in an excited state and may go in any direction. Greenhouse gas molecules that are excited by an additional photon may emit it by hitting other molecules. When, the photon travels into space it can be picked up by sensors on satellites, such as Landsat.

The data measured from satellites can then infer information about what altitude the photons were emitted. As van Wijngaarden discussed, these observations are compiled into libraries; they can be used to estimate the greenhouse effect at various latitudes, and to estimate what varies as greenhouse gases increase.

TWTW is not a forum to discuss details of the physics involved. This discussion only demonstrates that the physics is complex, not simple; that the general climate models (especially those of the United States) fail to capture what is physically occurring in the atmosphere with changing greenhouse gases; that contrary to the models, the increasing greenhouse effect is not dangerous. SEPP will suggest reasons why the models greatly overestimate the greenhouse effect; and that the models should be discarded or changed because they are unsuitable for government policy. See links under Challenging the Orthodoxy and

[https://chem.libretexts.org/Bookshelves/Physical\\_and\\_Theoretical\\_Chemistry\\_Textbook\\_Maps/Map%3A\\_Physical\\_Chemistry\\_\(McQuarrie\\_and\\_Simon\)/13%3A\\_Molecular\\_Spectroscopy](https://chem.libretexts.org/Bookshelves/Physical_and_Theoretical_Chemistry_Textbook_Maps/Map%3A_Physical_Chemistry_(McQuarrie_and_Simon)/13%3A_Molecular_Spectroscopy)

\*\*\*\*\*

**The Greenhouse Effect – Logarithmic Not Linear:** The influence of carbon dioxide is logarithmic ("natural" logarithms are logarithms to the base  $e$  rather than base 10). In his interview van Wijngaarden mentions this topic (which Richard Lindzen has discussed as well). This fact appears to be totally missing in the global climate models relied upon by the UN Intergovernmental Panel on Climate Change (IPCC) and its followers, including the US Global Change Research Program (USGCRP)

The “forcing” of greenhouse gas (in watts per square meter) is directly proportional to the logarithm of the amount of CO<sub>2</sub>, as compared to some starting amount. In turn, the temperature rise is supposedly proportional to the “forcing.” There is some disagreement about both constants of proportionality.

The reason we hear about the “sensitivity to doubling of CO<sub>2</sub>” is precisely because of the logarithmic relationship. Related matters are time for an investment to double in value, and half-life of radioactive materials.

Disregarding ozone because it is unimportant in the lower atmosphere, for the troposphere van Wijngaarden doubled CO<sub>2</sub>, methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) and increased water vapor by 6% in his climate model as an estimate of what would happen with an increase of 1°C (about 2 °F). From these changes he calculated that global temperatures would rise by about 1 to 1.5 °C (about 2 to 3 °F). Humanity probably would not notice it.

The calculations above, coupled with the calculations by John Christy based on atmospheric temperature trends begin establishing a relationship between greenhouse gases, especially carbon dioxide and water vapor, and temperatures. [As stated last week, John Christy calculates a doubling of CO<sub>2</sub> would result in a warming of about 1.1 °C. The estimates are remarkably similar given that the estimates were made by different groups, using different databases, and different methodologies (procedures).]

But it must be remembered that water vapor is the dominant greenhouse gas, and it must be considered in any such calculations, as it was by van Wijngaarden. And the effect of water vapor is included in the temperature trends calculated by Christy.

By contrast, the IPCC claims a doubling of CO<sub>2</sub> will increase temperatures by 3°C (plus or minus 1.5 °C). Evidence suggests that to get that much warming would require at least another doubling of CO<sub>2</sub> to 1640 parts per million. To reach the high end of the IPCC estimates would require yet another doubling to 3280 parts per million. Such calculations indicate that there is no end to the earth's fossil fuels -- quite the opposite to what was claimed in the 1970s. IPCC's estimates of up to 10 °C require an absurd amount of CO<sub>2</sub>.

Many of the IPCC models have what Judith Curry calls long, fat tails. A virtual unending of the amount of warming that may happen with increasing CO<sub>2</sub>. Based on what is happening in the atmosphere, such models are ludicrous. See links under Challenging the Orthodoxy.

\*\*\*\*\*

**Science – a Political Slogan:** The US political season is open, and the term science is being used as a political slogan more frequently than in recent years, though it has often been used in the past. A political poster child is climate change / global warming. How increasing carbon dioxide causes global cooling is not clear, but why bother with messy details?

Unfortunately, the leadership of a large collection of medical groups, including the American Medical Association, the American Heart Association, etc. have issued a “Call to Action on Climate, Health, and Equity: A Political Action Agenda. It states:

***“Climate change is one of the greatest threats to health America has ever faced—it is a true public health emergency. The health, safety and wellbeing of millions of people in the U.S. have already been harmed by human-caused climate change, and health risks in the future are dire without urgent action to fight climate change. As former Surgeon Generals Richard Carmona and David Satcher said: “We’re all at risk and our leaders must lead on global warming. Now.” But the health crisis caused by climate change also presents a major health opportunity. Building healthy energy, transportation, land use, and agriculture systems now will deliver immediate and sustained health benefits to all and reduce future health risks from climate change.”*** [Boldface in the original]

***“Therefore, we call on government, business, and civil society leaders, elected officials, and candidates for office to recognize climate change as a health emergency and to work across government agencies and with communities and businesses to prioritize action on this Climate, Health and Equity Policy Action Agenda.*** [Boldface in the original]

***Climate change is the “greatest public health challenge of the 21st century.” Extreme heat, powerful storms and floods, year-round wildfires, droughts, and other climate-related events have already caused thousands of deaths and displaced tens of thousands of people in the U.S. from their homes, with significant personal loss and mental health impacts especially for first responders and children. Air pollution, whose primary driver—fossil fuel combustion—is also the primary driver of climate change, causes hundreds of thousands of deaths in the U.S. annually. Mosquito and tick-borne diseases are spreading to new communities. The agricultural, food, and water systems we depend on for our survival are under threat. Without an urgent and effective response, these harms will greatly increase.”*** [Boldface in original]

Number 1 of the Priority Actions is:

***“Meet and strengthen U.S. commitments under the Paris agreement. A large and rapid reduction in carbon emissions is essential for our health and the health of future generations. The U.S. must recommit to the Paris Agreement and to aggressive emissions reductions sufficient to limit global temperature increases to 1.5°C above pre-industrial levels, and continue to engage with international and national leaders, business, and civil society to encourage and support others to develop multilateral, binding commitments to do the same, The US must ratify and implement the Kigali Amendment to reduce the use of hydrofluorocarbons***

Priority Number 2 is:

***“Transition rapidly away from the use of coal, oil and natural gas to clean, safe, and renewable energy and energy efficiency. With the technology available today, we can dramatically change U.S. energy use and systems to meet growing energy needs affordably, while reducing climate and air pollution. Proposed policies are***

- *Establish ambitious goals and timelines for renewable energy, energy efficiency and energy conservation.*
- *Support financing for the technologies and infrastructure needed to transition to zero carbon emissions, including development, adoption, and scale-up of renewable energy sources and investments in energy efficiency. Put a price on carbon that reflects its true social costs and phase out investments in and subsidies for fossil fuels for energy extraction and generation.*
- *Ensure that climate policies support sustainable energy for all by promoting distributed renewable energy and zero emission transportation technologies, with a priority on disadvantaged communities.*
- *Support a rapid reduction of petroleum and natural gas use in transportation through steady investment and regulations to increase fuel efficiency and transition to zero emission vehicle technologies as quickly as possible across the transportation sector.*
- *Establish ambitious goals for building efficiency and move toward a zero-carbon future by reducing carbon impacts from new and existing buildings. Transition away from wood burning, oil, and natural gas use for home heating and cooking.”*

It goes on including discussion about agriculture. Apparently, the authors and signers do not recognize that CO<sub>2</sub> is critical for photosynthesis, upon which all multicellular life is based.

The “call for action” would be far more impressive if it contained a pledge, with definitive times, to stop all use of fossil fuels in powering medical facilities (including electricity generation), emergency vehicles, and water and wastewater purification facilities in which the medical groups are involved.

Since a large part of the medical industry has declared itself to be competent in climate science, one is tempted to ask the doctor at their next visit to carefully explain how Molecular Spectroscopy is used to understand the greenhouse effect or explain the Kigali amendment on which any physician must be an expert. This “call to action” is one example of how the UN IPCC, the USGCRP, and others, have politicized science, especially climate science. See links under Defending the Orthodoxy.

\*\*\*\*\*

**Playing for the Camera:** On her blog, Climate Etc., Judith Curry discusses her recent experiences in testifying before a US House Committee. She questions the practices and utility involved in presenting such testimony. Unfortunately, Curry is learning that for many, such as Mr. Mann, Congressional hearings are just for show, and accomplish little except political posturing. See links under The Political Games Continue.

\*\*\*\*\*

**Lowering Standards:** A reporter for the Wall Street Journal, Russell Gold, wrote an article that was little more than fawning praise for a book he wrote on a wind promoter in Oklahoma. One quote reveals the reporter’s “in depth” analysis:

*“Put it all on a big enough grid, one that could use the ample sunshine from the desert Southwest to keep Atlanta’s office towers cool, or the persistent wind in the Great Plains to run Midwestern factories, and you’d address the often-repeated critique of renewable energy: The sun isn’t always shining and the wind isn’t always blowing. On a big enough grid, that’s not an issue. There is wind somewhere and the clouds don’t cover the entire U.S.”*

In their blogs, Donn Dears and Francis Menton demolish the article. But what about moving wind turbines when the wind patterns change? In his book, “Energy: A Textbook” Howard Hayden gives some indication of what may be involved. For example, just considering size and weight:

*“...a Vestas V-90 1.8 MW [wind turbine] can be placed on an 80-meter (262-foot) or 95-meter (312-foot) tower and has a diameter of 90 meters (295feet). Each of the three blades is 44 meters (144 feet) and has a maximum width of 3.5 m (11.5 feet) and has a mass of 6,700 kg (14,770 pounds). Together, the hub and nacelle weight in at 88 metric tonnes (14,780,000 pounds). The weights of the towers are 155 metric tonnes [342,000 lbs.] (80-m) and 205 metric tonnes [452,000 lbs.] (95-m).”*

Then one must stabilize the turbine:

*“For this case the wind turbine’s torque on the ground is equivalent to the weight of a large school bus at the end of a plank the length of a football field.” [120 yards or 110 meters]*

The small circular part shown above ground “will contain 63 metric tons of concrete [139,000 lbs.]; the rest of the base will contain 570 metric tons [1,254,000 lbs.]. The base will contain 41 metric tons [90,000 lbs.] of rebar.

One can see that it would not be easy to transport wind turbines for changing seasons or weather patterns. Further, it is doubtful that the ideas of placing such turbines on huge balloons could be possible because the ability to stabilize the balloons from buffeting winds and the instability created by the turbines is unlikely. See links under Lower Standards.

\*\*\*\*\*

**It's Magic!** Earlier in June, a visitor to Finland from France commented it's 10 degrees C warmer in Helsinki than in Paris. The weather has flipped. Now its much colder in Finland and much warmer in France. News sources are claiming an extreme heat wave in France.

Are the owners of vineyards in Bordeaux, France, worried? NO! The hot, dry weather is destroying the mildew that was forming on the grapes during the cold, wet spring and promoting photosynthesis to give the grapes the necessary sugars to create complex wines.

One cannot predict what will happen in this vintage. Right now, it appears that the heat wave of 2019 may create complex Bordeaux wines in the second and third growth vineyards that are reasonably affordable – It's Magic! See links under Changing Weather.

\*\*\*\*\*

### SEPP'S APRIL FOOLS AWARD THE JACKSON

SEPP is conducting its annual vote for the recipient of the coveted trophy, The Jackson, a lump of coal. Readers are asked to nominate and vote for who they think is most deserving.

Top vote getters include, but are not limited to: U.S. Rep Alexandria Ocasio Cortez (Always-on-Camera); Bill Nye, the Science Guy; John Schellnhuber, Director of Potsdam Center for Climate Impacts, advisor to Angela Merkle and Pope Francis; Pope Francis; Theresa May, retiring as UK PM, leaving huge presents; Paul Krugman, NYT columnist and public "intellectual"; and Greta Thunberg, "the young thing." **Voting will close on July 15, extended from June 30**, with the winner announced shortly thereafter.

\*\*\*\*\*

**Number of the Week: 2.34 mmb/d.** According to the US Energy Information Agency, in 2018 the US imported 9.93 million barrels of oil per day (mmb/d) and exported 7.59 mmb/d for a net import of 2.34 mmb/d for the year. The top five source countries of U.S. petroleum imports in 2018 were Canada, Saudi Arabia, Mexico, Venezuela, and Iraq.

<https://www.eia.gov/tools/faqs/faq.php?id=727&t=6>

The US refineries on the Gulf Coast need to blend a combination of heavy crude and the light crude that is usually produced by hydraulic fracturing. The change in imports has been dramatic. *"U.S. Gulf Coast crude oil imports averaged 1.8 million barrels per day (b/d) in March 2019, the lowest level since March 1986 and significantly lower than the peak of 6.6 million b/d in March 2007. Preliminary weekly data indicate that Gulf Coast crude oil imports have averaged about 1.9 million b/d through April and May."*

[https://www.eia.gov/petroleum/weekly/archive/2019/190605/includes/analysis\\_print.php](https://www.eia.gov/petroleum/weekly/archive/2019/190605/includes/analysis_print.php)

---

### NEWS YOU CAN USE:

#### ***Suppressing Scientific Inquiry***

#### **Failed Replication of Famous Research Rejected**

When scientific journals decline to address their own fake news.

By Donna Laframboise, Big Picture News, June 26, 2019

<https://nofrackingconsensus.com/2019/06/26/failed-replication-of-famous-research-rejected/>

#### **Peter Ridd: The Great Barrier Reef has about the same amount of coral as in 1985**

By Jo Nova, Her Blog, June 23, 2019

<http://joannenova.com.au/2019/06/peter-ridd-the-great-barrier-reef-has-about-the-same-amount-of-coral-as-in-1985/>

“UPDATE: Importantly — Ridd says that the admin are still utterly convinced they are right. They have no remorse, no recognition of why they were wrong. Does this mean admin staff now decide what science is, not Profs? Apparently so. They hold the purse strings, not the Profs. Power follows the money. Indeed, JCU has no commitment to free speech; they’ve now removed the clause that ensured Ridd won. In their minds, their mistake was not in being draconian, but being careless with legal clauses. The Deep State tightens its stranglehold on science.”

### ***Challenging the Orthodoxy -- NIPCC***

#### **Climate Change Reconsidered II: Physical Science**

Idso, Carter, and Singer, Lead Authors/Editors, Nongovernmental International Panel on Climate Change (NIPCC), 2013

<https://www.heartland.org/media-library/pdfs/CCR-II/CCR-II-Full.pdf>

Summary: <http://www.nipccreport.org/reports/ccr2a/pdf/Summary-for-Policymakers.pdf>

#### **Climate Change Reconsidered II: Biological Impacts**

Idso, Idso, Carter, and Singer, Lead Authors/Editors, Nongovernmental International Panel on Climate Change (NIPCC), 2014

<http://climatechangereconsidered.org/climate-change-reconsidered-ii-biological-impacts/>

Summary: <https://www.heartland.org/media-library/pdfs/CCR-IIb/Summary-for-Policymakers.pdf>

#### **Climate Change Reconsidered II: Fossil Fuels**

By Multiple Authors, Bezdek, Idso, Legates, and Singer eds., Nongovernmental International Panel on Climate Change, April 2019

<http://store.heartland.org/shop/ccr-ii-fossil-fuels/>

Download with no charge:

<http://climatechangereconsidered.org/wp-content/uploads/2019/01/Climate-Change-Reconsidered-II-Fossil-Fuels-FULL-Volume-with-covers.pdf>

#### **Why Scientists Disagree About Global Warming**

The NIPCC Report on the Scientific Consensus

By Craig D. Idso, Robert M. Carter, and S. Fred Singer, Nongovernmental International Panel on Climate Change (NIPCC), Nov 23, 2015

<http://climatechangereconsidered.org/>

Download with no charge:

<https://www.heartland.org/policy-documents/why-scientists-disagree-about-global-warming>

#### **Nature, Not Human Activity, Rules the Climate**

S. Fred Singer, Editor, NIPCC, 2008

[http://www.sepp.org/publications/nipcc\\_final.pdf](http://www.sepp.org/publications/nipcc_final.pdf)

#### **Global Sea-Level Rise: An Evaluation of the Data**

By Craig D. Idso, David Legates, and S. Fred Singer, Heartland Policy Brief, May 20, 2019

<https://www.heartland.org/template-assets/documents/publications/SeaLevelRiseCCRII.pdf>

### ***Challenging the Orthodoxy***

The "Simple Physics" Slogan

By John Robson, Climate Discussion Nexus, Comments by William van Wijngaarden,  
Department of Physics and Astronomy, York University, Canada, April 16, 2019  
<https://climatediscussionnexus.com/video/> -- Video  
<https://climatediscussionnexus.com/videos/the-simple-physics-slogan/> -- Text

### **A conversation with John Christy, for Association des climato-réalistes**

Guest interview by Grégoire Canlorbe, Translated by Friends of Science, WUWT, June 29, 2019  
<https://wattsupwiththat.com/2019/06/29/a-conversation-with-john-christy-for-association-des-climato-realistes/>

### **Net Zero Emissions Will Never Be “Achieved;” Reduced Global CO2 Emissions Will Be Hard Enough**

By Alan Carlin, Carlin Economics and Science, June 23, 2019  
<http://www.carlineconomics.com/archives/5040>

### ***Challenging the Orthodoxy -- Conference***

#### **Invitation: attend the Washington D.C. climate conference with me at a special rate**

By Anthony Watts, WUWT, June 26, 2019  
<https://wattsupwiththat.com/2019/06/26/attend-the-washington-d-c-climate-conference-with-me/>

### ***Defending the Orthodoxy***

#### **Medical groups: Climate change is 'greatest public health challenge of the 21st century'**

By Chris Mills Rodrico, The Hill, June 24, 2019  
<https://thehill.com/policy/energy-environment/449980-medical-groups-climate-change-greatest-public-health-challenge-21st-century>

Link to letter: U.S. Call to Action – On Climate, Health, and Equity: A Policy Action Agenda  
[https://climatehealthaction.org/media/cta\\_docs/US\\_Call\\_to\\_Action.pdf](https://climatehealthaction.org/media/cta_docs/US_Call_to_Action.pdf)

### **How to Debate a Science Denier**

A new finding shows that marshaling facts and identifying an opponent’s rhetorical techniques are effective at dampening a skeptic’s message

By Diana Kwon, Scientific American, June 25, 2019

[https://www.scientificamerican.com/article/how-to-debate-a-science-denier/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+ScientificAmerican-News+%28Content%3A+News%29](https://www.scientificamerican.com/article/how-to-debate-a-science-denier/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+ScientificAmerican-News+%28Content%3A+News%29)

“The first, called topic rebuttal, opposes misinformation about a given issue with established facts. Another, known as technique rebuttal, involves unmasking methods that science deniers use to mislead their audience.”

“Overall, I think that’s a positive result,” says John Cook, a cognitive scientist at George Mason University, who did not take part in the study. “This work gives communicators confidence that they can use different approaches and still be effective.”

“Cognitive: of, relating to, being, or involving conscious intellectual activity (such as thinking, reasoning, or remembering)”

“... based on or capable of being reduced to empirical factual knowledge.” Merriam-Webster  
*[SEPP Comment: Does “cognitive scientist” John Cook realize his often-repeated poll inserted biases of the pollsters after the poll was complete?]*

### **Rise of the Extinction Deniers**



Just like climate deniers, they're out to obfuscate and debase the scientists and conservationists trying to save the world—and maybe get rid of a few pesky species in the process

By John Platt, Scientific American, June 22, 2019

<https://blogs.scientificamerican.com/extinction-countdown/rise-of-the-extinction-deniers/>

*[SEPP Comment: Scientific American continues its downward spiral.]*

### **How Democrats came to oppose natural gas**

By Any Harder, Axios, June 25, 2019

<https://www.axios.com/democrats-oppose-natural-gas-climate-change-e80e0d0c-2112-49da-b5d8-10fa26f1608d.html>

“The science of climate change has grown more urgent in the face of continued inaction in America and around the world.”

*[SEPP Comment: How sad! Now that by using natural gas, the US are reduced CO2 emissions more than any other industrialized country that initially signed the Paris accord, this political group wishes to abandon natural gas? For what?]*

### ***Questioning the Orthodoxy***

#### **A National Narrative for Media on Climate Change**

Guest Opinion by Kip Hansen, WUWT, June 22, 2019

<https://wattsupwiththat.com/2019/06/22/a-national-narrative-for-media-on-climate-change/>

### **Whatever happened to the Global Warming Hiatus?**

By Clive Best, His Blog, June 24, 2019

<http://clivebest.com/blog/?p=8934>

### **Climate security confusion abounds**

By David Wojick, CFACT, June 12, 2019

<https://www.cfact.org/2019/06/12/climate-security-confusion-abounds/>

*[SEPP Comment: Would global cooling and advancing glaciers provide climate security?]*

### ***After Paris!***

#### **The Elephant in the Room: Lack of Warming and the Eastern Coal Rampage**

By Vijay Jayaraj, Townhall, June 27, 2019

[https://townhall.com/columnists/vijayjayaraj/2019/06/27/the-elephant-in-the-room-lack-of-warming-and-the-eastern-coal-rampage-n2549068?utm\\_source=thdaily&utm\\_medium=email&utm\\_campaign=nl&newsletterad=06/27/2019&bcid=600713400c5e414103c69dc935baaf47&recip=4143601](https://townhall.com/columnists/vijayjayaraj/2019/06/27/the-elephant-in-the-room-lack-of-warming-and-the-eastern-coal-rampage-n2549068?utm_source=thdaily&utm_medium=email&utm_campaign=nl&newsletterad=06/27/2019&bcid=600713400c5e414103c69dc935baaf47&recip=4143601)

### **Coal Power Plants Get \$64 Billion Lifeline from G20 Governments**

By Staff Writers, Bloomberg, Via GWPF, June 26, 2019

<https://www.thegwpf.com/new-coal-power-plants-get-64-billion-lifeline-from-g20-governments/>

### **G20 Nations Water Down Commitment to Climate Change Action**

By Staff Writers, Financial Times, Via GWPF, June 25, 2019

<https://www.thegwpf.com/g20-nations-water-down-commitment-to-climate-change-action/>

### **Macron's G-20 Climate Threat Melts Away Just Like the Ice Caps**

By Gregory Viscusi, Bloomberg, June 27, 2019

<https://www.bloomberg.com/news/articles/2019-06-27/macron-s-g-20-climate-threat-melts-away-just-like-the-ice-caps>

### **Dutch Electricity Stats**

By Paul Homewood, Not a Lot of People Know That, June 23, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/06/23/dutch-electricity-stats/>

Link to energy data on 27 European countries including actual power generation, generation by fuel type and more

By Staff, Energodock, Accessed June 28, 2019

<http://energodock.com/>

For June 23; fossil fuels account for 72% of generation in Holland, with wind at just 6%, hard coal, 18%.

### ***Change in US Administrations***

#### **Media Attacks Should Be a Signal to Trump: Focus on Flawed Climate Science**

By Tom Harris and Jay Lehr, WUWT, June 24, 2019

<https://wattsupwiththat.com/2019/06/24/media-attacks-should-be-a-signal-to-trump-focus-on-flawed-climate-science/>

#### **White House Releases Revised Guidance for Climate Policy**

By Marlo Lewis, Jr. CEI, June 25, 2019

<https://cei.org/blog/white-house-releases-revised-guidance-climate-policy>

*[SEPP Comment: NEPA was used to deny the construction of a gate-barrier system that would have protected many lives in New Orleans from flooding during Katrina.]*

#### **Trump administration to reconsider allowing controversial Alaska mining project**

By Miranda Green, The Hill, June 26, 2019

<https://thehill.com/policy/energy-environment/450478-trump-administration-to-reconsider-allowing-controversial-alaska>

### ***Problems in the Orthodoxy***

#### **House of Lords Rebukes Government for Rushing Through Net Zero**

By Staff Writers, GWPF, Jun3 27, 2019

<https://www.thegwpf.com/house-of-lords-rebuke-government-for-rushing-through-net-zero/>

#### **Only eight EU countries to phase out coal by 2030**

By Paul Homewood, Not a Lot of People Know That, June 22, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/06/22/only-eight-eu-countries-to-phase-out-coal-by-2030/>

### ***Seeking a Common Ground***

#### **Why GDP Still Matters**

By Bjørn Lomborg, Project Syndicate, June 20, 2019

<https://www.project-syndicate.org/commentary/new-zealand-wellbeing-budget-gdp-advantages-by-bjorn-lomborg-2019-06>

### ***Review of Recent Scientific Articles by CO2 Science***

#### **A Large Increase in Juniper and Spruce Water Use Efficiency**

Griessinger, J., Bräuning, A., Helle, G., Schlessner, G.H., Hochreuther, P., Meier, W. J.-H. and Zhu, H. 2019. A dual stable isotope approach unravels common climate signals and species-specific responses to environmental change stored in multi-century tree-ring series from the Tibetan Plateau. *Geosciences* 9: 151; doi:10.3390/geosciences9040151. June 28, 2019

<http://www.co2science.org/articles/V22/jun/a12.php>

“And thus their work adds to the ever-growing body of literature demonstrating real-world evidence of what short-term laboratory and field experimental studies have concluded, that rising atmospheric CO<sub>2</sub> increases plant water use efficiency. And that is exceptionally good news for plants growing in arid regions where water is a limiting factor to growth.”

### **The Response of Grape Plantlets to CO<sub>2</sub> Enrichment**

Zhao, X., Li, W.-F., Wang, Y., Ma, Z.-H., Yang, S.-J., Zhou, Q., Mao, J. and Chen, B.-H. 2019. Elevated CO<sub>2</sub> concentration promotes photosynthesis of grape (*Vitis vinifera* L. cv. 'Pinot noir') plantlet in vitro by regulating RbcS and Rca revealed by proteomic and transcriptomic profiles. *BMC Plant Biology* 19: 42, doi.org/10.1186/s12870-019-1644-y. June 26, 2019

<http://www.co2science.org/articles/V22/jun/a11.php>

“Such findings suggest Pinot Noir may well be a ‘winner’ (in terms of growth and development) among plants in the future if the air's CO<sub>2</sub> content continues to rise.”

*[SEPP Comment: For lovers of “old world Burgundy” this may be a blessing or a curse. Will the resulting wines have the austere structure some seek? Still, innovation is surprisingly common in the world wine industry.]*

### **Resilience of Central Pacific Corals to Repeated Heat Stress Events**

Donner, S.D. and Carilli, J. 2019. Resilience of Central Pacific reefs subject to frequent heat stress and human disturbance. *Scientific Reports* 9: 3484, DOI: 10.1038/s41598-019-40150-3. June 24, 2019

<http://www.co2science.org/articles/V22/jun/a10.php>

### **Elevated CO<sub>2</sub> Improves Soybean Growth and Mitigates the Impact of Water Deficit**

Bencke-Malato, M., De Souza, A.P., Ribeiro-Alves, M., Schmitz, J.F., Buckeridge, M.S. and Alves-Ferreira, M. 2019. Short-term responses of soybean roots to individual and combinatorial effects of elevated [CO<sub>2</sub>] and water deficit. *Plant Science* 280: 283-296. June 21, 2019

<http://www.co2science.org/articles/V22/jun/a9.php>

### ***Models v. Observations***

#### **Columbia researchers provide new evidence on the reliability of climate modeling**

Observational data of equatorial circulation pattern confirms that the pattern is weakening, a development with important consequences for future rainfall in the subtropics

Press Release, Columbia University School of Engineering and Applied Science, June 24, 2019

[https://www.eurekalert.org/pub\\_releases/2019-06/cuso-crp062119.php](https://www.eurekalert.org/pub_releases/2019-06/cuso-crp062119.php)

Link to paper: Opposite tropical circulation trends in climate models and in reanalyses

By Rei Chemke & Lorenzo M. Polvani, *Nature Geoscience*, June 24, 2019

<https://www.nature.com/articles/s41561-019-0383-x>

*[SEPP Comment: Pertains to the Hadley circulation; does not pertain to the overall reliability of the modeling.]*

#### **Part of the Pacific Ocean is not warming as expected, but why?**

By Kevin Krajick, Columbia University, Phys.Org, June 25, 2019 [H/t WUWT]

<https://phys.org/news/2019-06-pacific-ocean.html>

Link to paper: Strengthening tropical Pacific zonal sea surface temperature gradient consistent with rising greenhouse gases

By Richard Seager, et al., Nature, Climate Change, June 24, 2019

<https://www.nature.com/articles/s41558-019-0505-x>

“This stark discrepancy between models and observations has troubled the climate research community for two decades. Here, by returning to the fundamental dynamics and thermodynamics of the tropical ocean–atmosphere system, and avoiding sources of model bias, we show that a parsimonious formulation of tropical Pacific dynamics yields a response that is consistent with observations and attributable to rising GHGs.”

### **Model Issues**

#### **The Best Estimate Yet of the Impact of Global Warming on the Pacific Northwest**

By Cliff Mass, Weather and Climate Blog, June 24, 2019

<https://cliffmass.blogspot.com/search?updated-max=2019-06-26T13:55:00-07:00&max-results=1&start=1&by-date=false>

“The model runs are reasonably close to the observations before 2018, perhaps a degree too warm. You will notice a steady rise over the century--nothing abrupt. It appears that global warming might have contributed about a degree (C) of warming since 1970, with an additional 4C by the end of the century.”

*[SEPP Comment: As with IPCC models, the estimates are far above estimates based on actual observations.]*

### **Measurement Issues -- Surface**

#### **Adjusted “Unadjusted” Data: NASA Uses The “Magic Wand Of Fudging”, Produces Warming Where There Never Was**

By Kirye and Pierre Gosselin, No Tricks Zone, June 25, 2019

<https://notrickszone.com/2019/06/25/adjusted-unadjusted-data-nasa-uses-the-magic-wand-of-fudging-produces-warming-where-there-never-was/>

*[SEPP Comment: More virtual reality from NASA-GISS. “Virtual reality (VR) is an experience taking place within simulated and immersive environments that can be similar to or completely different from the real world. Applications of virtual reality can include entertainment (i.e. gaming) and educational purposes (i.e. medical or military training). Other, distinct types of VR style technology include augmented reality and mixed reality.” – Wikipedia]*

#### **Plummeting June 28 Temperatures In The US**

By Tony Heller, The Deplorable climate Science Blog, June 28, 2019

<https://realclimatescience.com/2019/06/plummeting-june-28-temperatures-in-the-us/>

### **Measurement Issues -- Atmosphere**

#### **Researchers report annual variability of ice-nucleating particle concentrations at different Arctic locations**

Press Release, Leibniz Institute for Tropospheric Research (TROPOS), June 21, 2019

<https://phys.org/news/2019-06-annual-variability-ice-nucleating-particle-arctic.html>

### **Measurement Issues – Energy Flow**

#### **MODTRAN: Its Quirks and Uses**

Guest post by Kevin Kilty, WUWT, June 24, 2019

<https://wattsupwiththat.com/2019/06/24/modtran-its-quirks-and-uses/>

### *Changing Weather*

#### **Shock News–It Gets Hot In France During The Summer!**

By Paul Homewood, Not a Lot of People Know That, June 25, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/06/25/shock-news-it-gets-hot-in-france-during-the-summer/>

#### **Bordeaux winemakers cheer heatwave: 'It's magic!'**

By Staff Writers, Bordeaux (AFP), June 26, 2019

[http://www.seeddaily.com/reports/Bordeaux\\_winemakers\\_cheer\\_heatwave\\_Its\\_magic\\_999.html](http://www.seeddaily.com/reports/Bordeaux_winemakers_cheer_heatwave_Its_magic_999.html)

See link immediately above

#### **Contrary to Global Warming Predictions, Great Lakes Water Levels Now at Record Highs**

By Roy Spencer, His Blog, June 27, 2019

<http://www.drroyspencer.com/2019/06/contrary-to-global-warming-predictions-great-lakes-water-levels-now-at-record-highs/>

#### **How Cold Air Caused a Heatwave**

By Jim Steele, Landscapes and Cycles, June 25, 2019

<http://landscapesandcycles.net/how-cold-air-caused-a-heatwave.html>

### *Changing Climate*

#### **New Study Shows Medieval Climate Period Was Global, Driven By Natural “Atmospheric-Ocean Cycles”, Not CO<sub>2</sub>**

The Medieval Warm Period in Oceania

By Die kalte Sonne

Translated by P Gosellin, No Tricks Zone, June 23, 2019

<https://notrickszone.com/2019/06/23/new-study-shows-medieval-climate-period-was-global-driven-by-natural-atmospheric-ocean-cycles-not-co2/>

Link to paper: The Medieval Climate Anomaly in Oceania

By Sebastian Lüning, et al., Environmental Reviews, June 25, 2019

<https://www.nrcresearchpress.com/doi/10.1139/er-2019-0012#.XRZSRuhKguV>

“The end of the medieval warming [in Oceania] at around 1500 AD occurred about two centuries later than on most other continents, suggesting a possible interhemispheric climate lag mechanism possibly involving deepwater circulation.”

### *Changing Seas*

#### **Coral Mortality Rates Higher During Cold Periods – And There’s Been Recent Cooling In Coral Environments**

By Kenneth Richard, No Tricks Zone, June 24, 2019

<https://notrickszone.com/2019/06/24/coral-mortality-rates-higher-during-cold-periods-and-theres-been-recent-cooling-in-coral-environments/>

### *Changing Cryosphere – Land / Sea Ice*

#### **Arctic Sea Ice Surprise Global Warming Experts By Remaining Stable This Decade**

By P Gosselin, No tricks Zone, June 28, 2019

<https://notrickszone.com/2019/06/28/arctic-sea-ice-surprise-global-warming-experts-by-remaining-stable-this-decade/>

Link to Polar Portal

By Staff, DMI, The Danish Arctic research institutions, Accessed June 28, 2019

<http://polarportal.dk/en/home/>

“Based on this data, it can be seen that during the period 2003-2011 the Greenland Ice Sheet has lost 234 km<sup>3</sup> of water per year, corresponding to an annual contribution to the mean increase in sea level of 0.65 mm.” or 0.026 inches per year.

### **Scientists find 56 lakes under the Greenland Ice Sheet**

By Brooks Hays, Washington (UPI), Jun 26, 2019

[http://www.spacedaily.com/reports/Scientists\\_find\\_56\\_lakes\\_under\\_the\\_Greenland\\_Ice\\_Sheet\\_999.html](http://www.spacedaily.com/reports/Scientists_find_56_lakes_under_the_Greenland_Ice_Sheet_999.html)

Link to paper: Distribution and dynamics of Greenland subglacial lakes

By J. S. Bowling, S. J. Livingstone, A. J. Sole & W. Chu, Nature Communications, June 26, 2019

<https://www.nature.com/articles/s41467-019-10821-w>

From the abstract: “Based on our results and previous observations, we suggest three zones of formation: stable lakes in northern and eastern regions above the Equilibrium Line Altitude (ELA) but away from the interior; hydrologically-active lakes near the ELA recharged by surface meltwater and; small, seasonally-active lakes below the ELA, which form over winter and drain during the melt season.”

### **Austrian Weather Agency: “Glaciers Have Recovered” Due To A “Snowy Winter”...Record June Snow Depth!**

By P Gosselin, No Tricks Zone, June 20, 2019

<https://notrickszone.com/2019/06/26/austrian-weather-agency-glaciers-have-recovered-due-to-a-snowy-winter-record-june-snow-depth/>

“Record June snow height set at the Rudolfshütte”

### **Climate Alarmists Meltdown Over Glacier Nat'l Park**

By Larry Bell, Newsmax, June 24, 2019

<https://www.newsmax.com/larrybell/bozeman-montana-park-gnp/2019/06/24/id/921748/>

*[SEPP Comment: Going-to-the-Sun Road was started in 1921 and dedicated in 1933.]*

### **Now 20 years with no trend in ice breakup dates for Western Hudson Bay polar bears**

By Susan Crockford, Polar Bear Science, June 26, 2019

<https://polarbearscience.com/2019/06/26/now-20-years-with-no-trend-in-ice-breakup-dates-for-western-hudson-bay-polar-bears/>

### ***Agriculture Issues & Fear of Famine***

#### **Agriculture Department buries studies showing dangers of climate change**

The Trump administration has stopped promoting government-funded research into how higher temperatures can damage crops and pose health risks.

By Helena Bottemiller Evich, Politico, June 23, 2019

<https://www.politico.com/story/2019/06/23/agriculture-department-climate-change-1376413>

*[SEPP Comment: Includes a list of studies, which exaggerated the effects of climate change such as “rising CO<sub>2</sub> in the atmosphere is projected to alter pest biology, such as by making weeds proliferate or temperatures more hospitable to damaging insects” or increasing vulnerability from depleting the Ogallala aquifer, a problem known for over 40 years.]*

### **The Setup is like 1315**

Guest Commentary by David Archibald, WUWT, June 23, 2019

<https://wattsupwiththat.com/2019/06/23/the-setup-is-like-1315/>

### ***Lowering Standards***

#### **The Wall Street Journal Embarrasses Itself On The Economics Of 100% Intermittent Renewable Energy**

By Francis Menton, Manhattan Contrarian, June 23, 2019

<https://www.manhattancontrarian.com/blog/2019-6-23-the-wall-street-journal-fails-to-tackle-the-economics-of-100-intermittent-renewable-energy>

#### **WSJ Joins Fake News Media**

By Donn Dears, Power For USA, June 25, 2019

<https://ddears.com/2019/06/25/wsj-joins-fake-news-media/>

[SEPP Comment: The reporter, Russell Gold, of the WSJ article was the author of the book in question.]

### ***Communicating Better to the Public – Exaggerate, or be Vague?***

#### **Florida’s Climate Crisis and Sea Level Rise Non Sequitur**

By David Middleton, WUWT, June 28, 2019

<https://wattsupwiththat.com/2019/06/28/floridas-climate-crisis-and-sea-level-non-sequitur/>

### ***Communicating Better to the Public – Do a Poll?***

#### **Reuters Poll: Do Americans Want Aggressive Action on Climate?**

By Marlo Lewis, Jr., CEI, June 27, 2019

<https://cei.org/blog/reuters-poll-do-americans-want-aggressive-action-climate>

#### **Union of Concerned Scientists (UCS) Climate Liability Survey Based on Flawed Methodology**

By Spencer Walrath, Energy In Depth June 24, 2019

<https://eidclimate.org/union-of-concerned-scientists-climate-liability-survey-findings-based-on-flawed-methodology/>

Link to survey: Support for Lawsuits Against Fossil Fuel Companies

By Jennifer Marlon, et al., Yale Program on Climate Change Communication, June 19, 2019

<https://climatecommunication.yale.edu/publications/majority-of-americans-think-fossil-fuel-companies-are-responsible-for-the-damages-caused-by-global-warming/>

### ***Communicating Better to the Public – Go Personal.***

#### **The Problem With Hate Speech**

Preventing dialogue and discrediting disagreement.

By Donna Laframboise, Big Picture News, June 24, 2019

<https://nofrackingconsensus.com/2019/06/24/the-problem-with-hate-speech/>

“The reality is that crying hate has become one of the favourite tools in some circles to prevent dialogue and discredit disagreement.”

### ***Communicating Better to the Public – Use Propaganda***

#### **Sky Abandon Facts In Favour Of Climate Propaganda**

By Paul Homewood, Not a Lot of People Know That, June 25, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/06/25/sky-abandon-facts-in-favour-of-climate-propaganda/>

### ***Questioning European Green***

### **The World's Most Expensive Suicide Note**

By Paul Homewood, Not a Lot of People Know That, June 25, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/06/25/the-worlds-most-expensive-suicide-note/>

Link to legislation: The Climate Change Act 2008 (2050 Target Amendment) Order 2019

The National Archives, Legislation.gov.uk

<http://www.legislation.gov.uk/ukdsi/2019/9780111187654>

### **The economic case for net zero carbon emissions is hokum**

By Andrew Montford, Reaction, June 24, 2019

<https://reaction.life/the-economic-case-for-net-zero-carbon-emissions-is-hokum/>

In particular, nobody seems to have worked out that the CCC has pulled the wool over everyone's eyes about the scale of what is planned. They did this through a carefully worded headline message, which said that net zero could be achieved at a modest cost of 1–2% of GDP in 2050.

In essence, the whole of the CCC's case for net zero can be summarised as “everything we believe in will become cheaper; everything else will not”.

### **Natascha Engel; Net-Zero Carbon Target Is Reckless and Unrealistic**

By Natascha Engel, The Times, Via GWPF, June 28, 2019

<https://www.thegwpf.com/natascha-engel-net-zero-carbon-target-is-reckless-and-unrealistic/>

“So our carbon emissions over the past 20 years have dropped by less than 5 per cent — and we think we can reduce them by 100 per cent in the next 30 years?”

### **These green targets waved through by MPs will make the cost of no deal look like small change**

By Christopher Snowden, Telegraph, UK, Via GWPF, June 26, 2019

<https://www.thegwpf.com/these-green-targets-waved-through-by-mps-will-make-the-cost-of-no-deal-look-like-small-change/>

### **Lord Lawson Urges Parliament Not to Approve Net Zero**

By Staff Writers, GWPF, June 24, 2019

<https://www.thegwpf.com/lord-lawson-urges-mps-not-to-approve-net-zero/>

Link to letter: The Cost of a Net Zero Emissions Target

By Lord Lawson, GWPF, June 24, 2019

[https://www.thegwpf.com/content/uploads/2019/06/240619\\_Net-Zero.pdf](https://www.thegwpf.com/content/uploads/2019/06/240619_Net-Zero.pdf)

### **Theresa May's Holiday Will Cost Us Dear!**

By Paul Homewood, Not a Lot of People Know That, June 27, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/06/27/theresa-mays-holiday-will-cost-us-dear/>

“In 1715 the village of Le Pre-du-Bar vanished under a glacier caused landslide. The glacial high tide in the Alps came around 1750 and gradually the glaciers began their retreat, much to the relief of the people who lived there.”

### **German energy giant RWE vows action against climate activists**

By Ryland JAMES, Berlin (AFP), June 23, 2019

[http://www.energy-daily.com/reports/German\\_energy\\_giant\\_RWE\\_vows\\_action\\_against\\_climate\\_activists\\_999.html](http://www.energy-daily.com/reports/German_energy_giant_RWE_vows_action_against_climate_activists_999.html)



## **Greenpeace girls invaded a shareholders' meeting, faced a backlash**

By Lubos Motl, The Reference Frame, June 26, 2019

<https://motls.blogspot.com/2019/06/greenpeace-girls-invaded-shareholders.html>

“By the way, there exists a straightforward kosher method for Greenpeace to shut down the plant. Offer a greater amount of money to ČEZ than what Tykač offers, buy the plant from ČEZ, and shut it down! That's exactly the only legitimate way for the green activists to realize their dreams about the reduction of greenhouse gases.”

## ***Questioning Green Elsewhere***

### **As United States Divide, the Green New Deal Could Be Democrats' Undoing in 2020**

Places that still produce tangible things need energy, and at prices like those we have today.

By Joel Kotkin, Daily Beast, June 18, 2019

<https://www.thedailybeast.com/as-united-states-divide-the-green-new-deal-could-be-democrats-undoing-in-2020?ref=author>

### **Terence Corcoran: Why the global fossil-fuel phase-out is a fantasy akin to time travel**

To produce the power needed to offset fossil fuels, Canada would have to build two and a half \$13-billion hydro dams every year

By Terence Corcoran, Financial Post, June 21, 2019 [H/t WUWT]

<https://business.financialpost.com/opinion/terence-corcoran-why-the-great-fossil-fuel-phase-out-is-scientific-economic-and-political-fantasy-akin-to-time-travel>

## ***Non-Green Jobs***

### **As Shell cracker nears 'peak construction' point of 6,000 workers, promoter in D.C. pushes 'petrochemical Appalachian Renaissance'**

By Anya Litvak, Pittsburgh Post-Gazette, June 20, 2019

<https://www.post-gazette.com/business/powersource/2019/06/20/petrochemical-Appalachian-Shell-cracker-promoter-Washington-jobs-DOE-Ohio/stories/201906200133>

## ***Funding Issues***

### **World Bank Must Stop Loans for Fossil Fuel Projects**

By Donn Dears, Power For USA, June 28, 2019

<https://ddears.com/2019/06/28/world-bank-must-stop-loans-for-fossil-fuel-projects/>

## ***The Political Games Continue***

### **Hearing on climate change and natural disasters: Today**

By Judith Curry, Climate Etc. June 25, 2019

<https://judithcurry.com/2019/06/25/hearing-on-climate-change-and-natural-disasters-today/>

### **Truth(?) in testimony and convincing policy makers**

By Judith Curry, Climate Etc. June 27, 2019

<https://judithcurry.com/2019/06/27/truth-in-testimony-and-convincing-policy-makers/#more-24979>

Link to: A Guide to Expert Testimony for Climate Scientists

By Eileen A. Scallen, Supported in part by funding from William Mitchell College of Law and the Paleoclimate Program at the National Science Foundation, 2013

<https://mitchellhamline.edu/wp-content/uploads/sites/44/2013/08/A-Guide-to-Expert-Testimony-for-Climate-Scientists.07.31.13.pdf>

## **House Democrats Spread ‘Lies’ About Climate Change And Hurricanes, Scientist Says**

By Michael Bastasch, Daily Caller, June 24, 2019

<https://dailycaller.com/2019/06/24/house-democrats-climate-change/>

## **The Democratic Candidates' Bidding War: Can Anybody Even Compile A Full List?**

By Francis Menton, Manhattan Contrarian, June 26, 2019

<https://www.manhattancontrarian.com/blog/2019-6-26-the-democratic-candidates-bidding-war-can-anybody-even-compile-a-full-list>

## **New York City officials declare climate emergency**

By Chris Mills Rodrigo, The Hill, June 26, 2019

<https://thehill.com/policy/energy-environment/450506-new-york-city-officials-declare-climate-emergency>

### ***Litigation Issues***

#### **Dan Fumano: To sue or not to sue? A question for cities facing climate change**

As governments grapple with billions in climate-related costs, there is debate around whether suing energy firms is the best route.

By Dan Fumano, Vancouver Sun, June 26, 2019

<https://vancouversun.com/news/local-news/dan-fumano-to-sue-or-not-to-sue-a-question-for-cities-facing-climate-change>

*[SEPP Comment: How does one separate real costs from imaginary costs?]*

### ***Cap-and-Trade and Carbon Taxes***

#### **New Study Admits Even Modest Carbon Tax Would Hurt the Next Two Generations**

By Robert Murphy, Institute for Energy Research, June 11, 2019

<https://www.instituteforenergyresearch.org/climate-change/new-study-admits-even-modest-carbon-tax-would-hurt-the-next-two-generations/>

### ***EPA and other Regulators on the March***

#### **It's time to remake the out-of-control EPA**

By Josh First, American Thinker, June 19, 2019 [H/t John Dunn]

[https://www.americanthinker.com/blog/2019/06/its\\_time\\_to\\_remake\\_the\\_outofcontrol\\_epa.html](https://www.americanthinker.com/blog/2019/06/its_time_to_remake_the_outofcontrol_epa.html)

## **EPA Urges States to Submit CCR Programs Even as Coal Ash Regulatory Overhaul Continues**

By Sonal Patel, Power Mag, June 26, 2019

[https://www.powermag.com/epa-urges-states-to-submit-ccr-programs-even-as-coal-ash-regulatory-overhaul-continues/?mkt\\_tok=eyJpIjoiTldSbFpUYzNNV00xWIRsaCIsInQiOiJHd0VLd1wvOEEdTBFMnBGUHFtMlwvVUtHc1NEN1Bub1VBWG56NDJcL2JaMkVCR3o4enRXVTVLazNScUpLNFV3MGgzTFEraEVSbTdyTUgxeXdlM1A4WWZwcVFMbUdGZllrbnhUTDIkckZidVF1ZW5JblhZSGdlWFJMK25OTXViU09TUSJ9](https://www.powermag.com/epa-urges-states-to-submit-ccr-programs-even-as-coal-ash-regulatory-overhaul-continues/?mkt_tok=eyJpIjoiTldSbFpUYzNNV00xWIRsaCIsInQiOiJHd0VLd1wvOEEdTBFMnBGUHFtMlwvVUtHc1NEN1Bub1VBWG56NDJcL2JaMkVCR3o4enRXVTVLazNScUpLNFV3MGgzTFEraEVSbTdyTUgxeXdlM1A4WWZwcVFMbUdGZllrbnhUTDIkckZidVF1ZW5JblhZSGdlWFJMK25OTXViU09TUSJ9)

### ***Energy Issues – Non-US***

#### **Feds announce \$275M for 'largest private sector investment in Canadian history' — Kitimat, B.C.'s LNG project**

Cash earmarked for energy-efficient gas turbines needed for the \$40B project and a new bridge in Kitimat

By Staff Writers, CBC News, June 24, 2019

<https://www.cbc.ca/news/canada/british-columbia/275m-federal-government-lng-canada-kitimat-1.4649654>

“Last week, the House of Commons declared a national climate emergency in Canada.”

### **Trudeau Declares Climate Emergency... Then Approves Major Oil Pipeline**

By Nick Cunningham, Oil Price, June 19, 2019

<https://oilprice.com/Energy/Energy-General/Trudeau-Declares-Climate-Emergency-Then-Approves-Major-Oil-Pipeline.html>

### ***Energy Issues – Australia***

**“Insanity”. Feel the angst — should the Emissions Reductions Fund pay money to coal?**

By Jo Nova, Her Blog, June 28, 2019

<http://joannenova.com.au/2019/06/insanity-feel-the-angst-should-the-emissions-reductions-fund-pay-money-to-coal/>

**The planned electricity shortages begin and duped Australians say “thanks”**

By Jo Nova, Her Blog, June 26, 2019

<http://joannenova.com.au/2019/06/the-planned-electricity-shortages-begin-and-duped-australians-say-thanks/>

“Once upon a time Australians were rich enough to afford electricity on demand.”

### ***Energy Issues -- US***

**Power Plant Emissions Down Substantially in U.S. Since 1990**

By Aaron Larson, Power Mag, June 19, 2019

[https://www.powermag.com/power-plant-emissions-down-substantially-in-u-s-since-1990/?mkt\\_tok=eyJpIjoiTnpsaE5EQTRNRGMpYmpZeSIsInQiOiIwZkVmU1Z0UW5Ecmp1XC9ycnFcL1ZOXC90eXArSURXdlc3azNtaGxNZ2dlZ3IxEEdrQmJHwIB3QVZiK1lyRDJPSmZ4d1hENGdYVUUh0bExXdU5cL1wvNVBSWXNPWjc5UmJOdFJJbjRGeFZhMVwvZURRdXpKSStBc3F2SVJFZ3M1SkhZdU5KTSJ9](https://www.powermag.com/power-plant-emissions-down-substantially-in-u-s-since-1990/?mkt_tok=eyJpIjoiTnpsaE5EQTRNRGMpYmpZeSIsInQiOiIwZkVmU1Z0UW5Ecmp1XC9ycnFcL1ZOXC90eXArSURXdlc3azNtaGxNZ2dlZ3IxEEdrQmJHwIB3QVZiK1lyRDJPSmZ4d1hENGdYVUUh0bExXdU5cL1wvNVBSWXNPWjc5UmJOdFJJbjRGeFZhMVwvZURRdXpKSStBc3F2SVJFZ3M1SkhZdU5KTSJ9)

**As Renewables Surge Ahead of Coal, Lawmakers Introduce National Renewable Standard**

**By Sonal Patel, Power Mag. June 27, 2019**

[https://www.powermag.com/as-renewable-generation-surges-ahead-of-coal-lawmakers-introduce-national-renewable-standard/?mkt\\_tok=eyJpIjoiTm9U5mT0VEExWkRBNCIsInQiOiIjYXY1oyWlwwYnUwUEM5K25VRDV2dm9kbEVVK2FVSDIEeHV2SXlhUDFQTKewS1RHTU9mMXMrRVhhRIZsMIJYaW5KcHd5QVIHdzV5UGt5Um5kTm9LRHd4UzdLUUnRoZDZrbXlSSDNxU3dKb2g5bEdjSTBIWUZcL3VueWJxTnJuNzFpdTNZIn0%3D](https://www.powermag.com/as-renewable-generation-surges-ahead-of-coal-lawmakers-introduce-national-renewable-standard/?mkt_tok=eyJpIjoiTm9U5mT0VEExWkRBNCIsInQiOiIjYXY1oyWlwwYnUwUEM5K25VRDV2dm9kbEVVK2FVSDIEeHV2SXlhUDFQTKewS1RHTU9mMXMrRVhhRIZsMIJYaW5KcHd5QVIHdzV5UGt5Um5kTm9LRHd4UzdLUUnRoZDZrbXlSSDNxU3dKb2g5bEdjSTBIWUZcL3VueWJxTnJuNzFpdTNZIn0%3D)

“It [the bill] also says that every state ‘must transition to carbon-free electricity by 2050’ to meet U.S. climate goals, and that renewable energy is a ‘virtually unlimited’ resource that can help avoid pollution.”

*[SEPP Comment: When did U.S. climate goals become law?]*

**New York’s Climate and Community Protection Act of 2019**

By Roger Caiazza, WUWT, June 20, 2019

<https://wattsupwiththat.com/2019/06/20/new-yorks-climate-and-community-protection-act-of-2019/>

## **Oregon: Police seek 11 Republican Senators — in hiding to stop vote on 80% carbon reduction**

By Jo Nova, Her Blog, June 24, 2019

<http://joannenova.com.au/2019/06/oregon-police-seek-11-republican-senators-in-hiding-to-stop-vote-on-80-carbon-reduction/>

*[SEPP Comment: Democrats hold 18 of the 30 seats in the state senate. 20 senators have to be present for a vote to take place.]*

## **The Story of the Demise of Oregon's Climate Change Bill Is Real Wild**

By Rebecca Fishbein, Jezebel, June 25, 2019

<https://theslot.jezebel.com/the-oregon-climate-change-bill-is-dead-its-not-even-1835860688>

## ***Washington's Control of Energy***

### **U.S. Energy Policy: We Don't Need One**

By Kenneth Costello, Master Resource, June 27, 2019

<https://www.masterresource.org/national-energy-policy/us-energy-policy-not/>

“Energy policies often communicate the fantasy that we can have everything without paying a price – to an energy policymaker, there is a free lunch, at least that is what is often conveyed. In the real world, however, individuals and businesses have to constantly make tradeoffs – not everyone benefits from governmental actions even though occasionally we may be moving closer to a Pareto-superior condition. Energy policy is no exception to this reality.”

*[SEPP Comment: In the 1970s the US federal government instituted an energy policy to address the false claim the country was running out of oil and natural gas. The “miracle fuel” to save the country was coal.]*

## ***Oil and Natural Gas – the Future or the Past?***

### **Investing in American communities and natural resources**

By Carrie Domnitch, The Hill, June 18, 2019

<https://thehill.com/blogs/congress-blog/energy-environment/449134-investing-in-american-communities-and-natural>

“We are proud of the fact that royalties from federal natural gas and oil production fund conservation programs in all 50 states.”

## **Terence Corcoran: The world needs more of what Exxon is selling (and will for decades)**

World demand for Exxon's products, fossil fuels, is expected to increase and remain steady over the coming decade

By Terence Corcoran, Financial Post, June 26, 2019

<https://business.financialpost.com/opinion/terence-corcoran-the-world-needs-more-of-what-exxon-is-selling-and-will-for-decades>

## ***Return of King Coal?***

### **Evolving Coal Technologies Key to Trump's Climate Plan**

By Matthew Kandrach, Real Clear Energy, June 27, 2019

[https://www.realclearenergy.org/articles/2019/06/26/always\\_evolutionary\\_coal\\_technologies\\_key\\_to\\_trumps\\_climate\\_plan\\_110453.html](https://www.realclearenergy.org/articles/2019/06/26/always_evolutionary_coal_technologies_key_to_trumps_climate_plan_110453.html)

## ***Nuclear Energy and Fears***

### **Long-Delayed EPR Nuclear Plants Face Further Holdups**

By Aaron Larson, Power Mag, June 27, 2019

[https://www.powermag.com/long-delayed-epr-nuclear-plants-face-further-holdups/?mkt\\_tok=eyJpIjoiTldSbFpUYzNNV00xWIRsaCIsInQiOiJHd0VLd1wvOEEdTBFMnBGUHFtMlwwVUtHc1NEN1Bub1VBWG56NDJcL2JaMkVCR3o4enRXVTVLazNScUpLNFV3MGgzTFEraEVSBtdyTUgxeXdlM1A4WWZwcVFMbUdGZllrbnhUTDIickZidVF1ZW5JblhZS GdlWFJMK25OTXViU09TUSJ9](https://www.powermag.com/long-delayed-epr-nuclear-plants-face-further-holdups/?mkt_tok=eyJpIjoiTldSbFpUYzNNV00xWIRsaCIsInQiOiJHd0VLd1wvOEEdTBFMnBGUHFtMlwwVUtHc1NEN1Bub1VBWG56NDJcL2JaMkVCR3o4enRXVTVLazNScUpLNFV3MGgzTFEraEVSBtdyTUgxeXdlM1A4WWZwcVFMbUdGZllrbnhUTDIickZidVF1ZW5JblhZS GdlWFJMK25OTXViU09TUSJ9)

### **Nuclear Energy Just Isn't Competitive In The U.S.**

By Haley Zaremba, Oil Price.com, June 25, 2019

<https://oilprice.com/Alternative-Energy/Nuclear-Power/Nuclear-Energy-Just-Isnt-Competitive-In-The-US.html>

### ***Alternative, Green (“Clean”) Solar and Wind***

#### **Isle Of Man Seabird Populations Plummet As Wind farms Overwhelm The Irish Sea**

By Jason Endfield, His Blog, June 21, 2019 [H/t GWPF]

<http://jasonendfield.weebly.com/home/isle-of-man-sea-bird-populations-plummet-as-wind-farms-overwhelm-the-irish-sea>

#### **New Jersey's First Offshore Wind Farm Will Be a Mammoth 1.1-GW Ørsted Project**

By Sonal Patel, Power Mag. June 22, 2019

[https://www.powermag.com/new-jerseys-first-offshore-wind-farm-will-be-a-mammoth-1-1-gw-orsted-project/?mkt\\_tok=eyJpIjoiTldSbFpUYzNNV00xWIRsaCIsInQiOiJHd0VLd1wvOEEdTBFMnBGUHFtMlwwVUtHc1NEN1Bub1VBWG56NDJcL2JaMkVCR3o4enRXVTVLazNScUpLNFV3MGgzTFEraEVSBtdyTUgxeXdlM1A4WWZwcVFMbUdGZllrbnhUTDIickZidVF1ZW5JblhZS GdlWFJMK25OTXViU09TUSJ9](https://www.powermag.com/new-jerseys-first-offshore-wind-farm-will-be-a-mammoth-1-1-gw-orsted-project/?mkt_tok=eyJpIjoiTldSbFpUYzNNV00xWIRsaCIsInQiOiJHd0VLd1wvOEEdTBFMnBGUHFtMlwwVUtHc1NEN1Bub1VBWG56NDJcL2JaMkVCR3o4enRXVTVLazNScUpLNFV3MGgzTFEraEVSBtdyTUgxeXdlM1A4WWZwcVFMbUdGZllrbnhUTDIickZidVF1ZW5JblhZS GdlWFJMK25OTXViU09TUSJ9)

#### **Massachusetts looks to beef up commitment to offshore wind**

By Steve LeBlanc and Bob Salsberg, AP, June 1, 2019

<https://www.bostonherald.com/2019/06/01/massachusetts-looks-to-beef-up-commitment-to-offshore-wind/>

“A report released Friday by the Department of Energy Resources calls for the state to move forward with an additional procurement of up to 1,600 megawatts of offshore wind capacity, or enough to power up to 1 million homes.”

*[SEPP Comment: A million homes for what percentage of the time and who will supply the electricity when the wind fails?]*

### ***Alternative, Green (“Clean”) Energy -- Other***

#### **Waste-to-Energy: Air Pollution Renewable in Decline**

By Kennedy Maize, Master Resource, June 26, 2019

<https://www.masterresource.org/waste-to-energy-renewable/waste-to-energy-decline/>

### ***Alternative, Green (“Clean”) Energy -- Storage***

#### **Battery Storage—An Infinitesimal Part of Electrical Power**

By Steve Goreham, Energy Central, June 28, 2019

<https://www.energycentral.com/c/gr/battery-storage%E2%80%94infinitesimal-part-electrical-power>

### ***Alternative, Green (“Clean”) Vehicles***

## **Electric Car-Owners Shocked: New Study Confirms EVs Considerably Worse For Climate Than Diesel Cars**

By Tyler Durden, Zero Hedge, Apr 22, 2019 [H/t William Readdy]

<https://www.zerohedge.com/news/2019-04-21/new-study-shocks-electric-cars-considerably-worse-climate-diesel-cars>

Link to article: Electric vehicles emit more CO2 than diesel ones, German study says

By Oscar Schneider, The Brussels Times, Apr 17, 2019

<https://www.brusselstimes.com/all-news/business/technology/55602/electric-vehicles-emit-more-co2-than-diesel-ones-german-study-shows/>

[SEPP Comment: The newspaper has an update stating some people are contesting the study.]

### ***Carbon Schemes***

#### **CO2 for Enhanced Oil Recovery (a market niche)**

By Robert Bradley Jr., Master Resource, June 24, 2019

<https://www.masterresource.org/carbon-capture-coalition-ccc/co2-eor-market-niche/>

#### **Xcel's closure of Comanche coal-fired plant challenged by carbon capture proposal**

By Scott Weiser, The Complete Colorado, June 21, 2019 [H/t Roger Bezdek]

<https://pagetwo.completecolorado.com/2019/06/21/xcels-closure-of-comanche-coal-fired-plant-challenged-by-carbon-capture-proposal/>

#### **Bill Gates and Big Oil back this company that's trying to solve climate change by sucking CO2 out of the air**

By Katie Brigham, CNBC, June 22, 2019

<https://www.cnbc.com/2019/06/21/carbon-engineering-co2-capture-backed-by-bill-gates-oil-companies.html>

### ***Oh Mann!***

#### **“Is there not a single climate scientist out there who will call this out as improper?”**

By Anthony Watts, WUWT, June 28, 2019

<https://wattsupwiththat.com/2019/06/28/is-there-not-a-single-climate-scientist-out-there-who-will-call-this-out-as-improper/>

### ***Other Scientific News***

#### **Is a great iron fertilization experiment already underway?**

Press Release, University of South Florida, EurekAlert, June 26, 2019 [H/t WUWT]

[https://www.eurekalert.org/pub\\_releases/2019-06/uosf-ia062619.php](https://www.eurekalert.org/pub_releases/2019-06/uosf-ia062619.php)

#### **Sailing among the stars: how photons could revolutionize space flight**

By Ivan Couronne, Phys.org, June 20, 2019 [H/t Toshio Fujita]

<https://phys.org/news/2019-06-stars-photons-revolutionize-space-flight.html>

### ***Other News that May Be of Interest***

#### **China Reaps the Seed it Didn't Sow**

By Babette Francis, Quadrant, June 24, 2019

<https://quadrant.org.au/opinion/qed/2019/06/china-reaps-the-seed-it-didnt-sow/>

#### **Left Wing Luvvie Mark Rylance—Hypocrite Of The Month**

By Paul Homewood, Not a Lot of People Know That, June 24, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/06/24/left-wing-luvvie-mark-rylance-hypocrite-of-the-month/>

---

### **BELOW THE BOTTOM LINE:**

#### **US military consumes more hydrocarbons than most countries**

By Staff Writers, Lancaster UK (SPX), Jun 24, 2019

[http://www.oilgasdaily.com/reports/US\\_military\\_consumes\\_more\\_hydrocarbons\\_than\\_most\\_countries\\_999.html](http://www.oilgasdaily.com/reports/US_military_consumes_more_hydrocarbons_than_most_countries_999.html)

Link to paper: Hidden carbon costs of the “everywhere war”: Logistics, geopolitical ecology, and the carbon boot-print of the US military

By Belcher, Bigger, Neimark, and Kennelly, Transactions of the Institute of British Geographers, June 19, 2019

<https://rgs-ibg.onlinelibrary.wiley.com/doi/full/10.1111/tran.12319>

Opening sentence: “As climate change gathers pace, it is critical to assess how the world's largest institutions contribute to global environmental change.”

[SEPP Comment: Climate change gathers pace? The relationship between CO2 and temperatures is logarithmic!]

---

### **ARTICLES**

#### **1. ‘Life Finds a Way’ and ‘Good Enough’ Review: The Drive to Thrive**

Evolution is a process of solving real-world problems, not achieving abstract ideals. Some solutions are just good enough.

By David P. Barash, WSJ, June 28, 2019

[https://www.wsj.com/articles/life-finds-a-way-and-good-enough-review-the-drive-to-thrive-11561759246?mod=ig\\_booksjune29](https://www.wsj.com/articles/life-finds-a-way-and-good-enough-review-the-drive-to-thrive-11561759246?mod=ig_booksjune29)

SUMMARY: In reviewing two books, “Life Finds a Way” by Andreas Wagner, and “Good Enough” Daniel Milo, the author, a professor of psychology emeritus, brings up many interesting facets of species adaption and evolution. He writes:

*“Human beings are well adapted critters, but hardly perfect. Our knees and lower backs are frequent problems, a man’s prostate is awkwardly close to his urethra (sometimes requiring surgery), a woman’s birth canal is sometimes too small for an infant’s head (necessitating Caesarean delivery). In sum, we were not ‘intelligently designed’ but are the products of an evolutionary path filled with twists and turns, chance events and accidents. The process of natural selection maximizes fitness but is limited by what came before.*

*“In the 1930s, the biologist Sewall Wright introduced the concept of ‘adaptive landscapes,’ a useful way of conceptualizing evolutionary fitness by imagining living things on a multi-dimensional topography in which altitude indicates degree of adaptation. As with a real mountain landscape, an organism restricted to only going blindly uphill would eventually hit a cliff, and be doomed to languish at a less-than-optimal elevation. Sometimes you need to double back, or descend a bit, in order to attain the heights. Sometimes you find a new path, but one determined by where you started.*

*“In ‘Life Finds a Way,’ Andreas Wagner, a professor at the University of Zurich, underscores that evolution is a process of solving real-world problems, not achieving some abstract ideal. ‘Among the many paths that lead toward a peak, only a few reach it,’ he writes. ‘On the remaining paths, natural selection dead-ends below the highest peak—sometimes far below. In evolution’s landscapes, a climber’s risk of getting stuck near base camp is very real.’ Mr. Wagner’s key question is how nature enables an evolving species to avoid getting stuck on dead-end, low rise peaks. He answers by taking the reader on an impressively brisk intellectual tour through the glory days of early 20th-century evolutionary biology, when such polymaths as Wright, R.A. Fisher and J.B.S. Haldane connected genetics and natural selection, birthing the ‘neo-Darwinian synthesis’ that still illuminates the field.*

*“The book’s opening chapter, ‘The Cartography of Evolution,’ is an accessible nonmathematical introduction to population genetics, natural selection and evolution. Then, ‘On the Importance of Going Through Hell’ recounts how genetic sloughs of despond (such as inbreeding and intermittently maladaptive small group size) can often be prerequisites to ascending to higher fitness, through the process of small random changes in populations that Wright called ‘genetic drift.’ ‘Teleportation in Genetic Landscapes’ shows how sexual reproduction, with its unpredictable recombination of parental genomes, opens the door to adaptive novelty not available to organisms that replicate asexually.*

*“Mr. Wagner next takes an interesting further step, showing that evolution isn’t nature’s only problem-solving mechanism. ‘Of Diamonds and Snowflakes’ explores molecular structures based on minimizing energy expenditure. He points out that ‘many acts of creation are acts of problem solving. A gleaming quartz crystal embodies a solution to the problem of finding a stable arrangement of silicon and oxygen atoms. A metabolic enzyme breaking down glucose has solved the problem of harvesting energy from carbon bonds.’*

*“In later chapters, Mr. Wagner moves beyond evolutionary mechanisms to discuss creative problem-solving more generally. ‘Darwin in the Mind’ suggests that human intellectual creativity is a microcosm of Darwinian evolution, played out inside our heads, while a chapter called ‘Creative Machines’ describes how computers generate novelty. If ‘Life Finds a Way’ disappoints, it is only when the author tries to suggest what’s needed to cultivate creative problem-solving on a societal level. It is hardly original, in this regard, to recommend exchange of ideas, tolerance of failure, an abundance of free, unstructured time and an attitude of playfulness.*

*“Daniel Milo’s ‘Good Enough’ parallels ‘Life Finds a Way’ in seeking to apply insights from evolution to a human cultural phenomenon. But that is the only similarity. It is painfully obvious that Mr. Milo, chair of Natural Philosophy at Paris’s École des Hautes Études en Sciences Sociales, isn’t a biologist. He is nonetheless eager to critique what he sees as biology’s excessive embrace of the theory of natural selection, which he blames for valorizing ‘Darwinian’ competition at the societal level.”*

The author of the review concludes with further criticism of Milo’s book.

\*\*\*\*\*

### **‘The Spirit of Inquiry’ Review: Inventing the Scientist**

A history of the Cambridge Philosophical Society, a forum for the ‘spirit of inquiry’ founded 200 years ago this year.

By Christoph Irmscher, WSJ, June 28, 2019



[https://www.wsj.com/articles/the-spirit-of-inquiry-review-inventing-the-scientist-11561732216?mod=ig\\_booksjune29](https://www.wsj.com/articles/the-spirit-of-inquiry-review-inventing-the-scientist-11561732216?mod=ig_booksjune29)

SUMMARY: In reviewing the book prepared for the 200<sup>th</sup> anniversary of the Cambridge Philosophical Society, the author writes:

*'We like to tell tales of scientific discovery as if they were mostly the work of heroic individuals, thrust into glorious awareness during moments of epiphany: Archimedes figuring out how to measure the volume of objects while taking a bath and then running naked through the streets of Syracuse shouting 'Eureka!'; young Newton bonked on the head by a falling apple and thus coming up with the idea of the law of gravity; Darwin glimpsing the outlines of natural selection in the beaks of unsuspecting Galápagos finches; Marie Curie's lab illuminated, on a dark December night in Paris, by the bluish glow of the new element radium. The reality was often quite different: For example, it took the services of John Gould, preserver of the collections at the London Zoological Society, to help Darwin understand what he had seen in the Galápagos (Gould quite appropriately excoriated him for not taking better notes).'*

*"We prefer to think of history not as 'swaddled with darkness,' in that wonderful phrase from T.S. Eliot's 'Gerontion,' but as punctuated by moments of rapt wonder. Susannah Gibson's brilliant study of the Cambridge Philosophical Society, 'The Spirit of Inquiry,' a model of what happens when a skilled historian breathes new life into dusty archival material, suggests another option: to think of scientific progress as a series of incremental changes over time, born, at least in part, from looking, listening, reading, talking, dreaming and dining together.*

*"Ms. Gibson's bicentennial tribute beautifully re-creates the history of the society, which was conceived by a pair of Cambridge men, Adam Sedgwick (1785-1873), the Woodwardian Professor of Geology, and John Stevens Henslow (1796-1861), a recent graduate and convert to geological fieldwork. Away from the stuffy classrooms of the university, collecting fossils on the shores of the Isle of Wight, where the Continent seemed almost within reach, they became painfully aware of the backward state of scientific knowledge in their country. Sedgwick, a poor pastor's son from Yorkshire, gripped early on by 'mathematical mania,' had worked hard to get to where he was. Science was a deeply personal matter to him, filling his waking hours as well as his nights, when mathematical symbols danced through his dreams. Once Sedgwick had been a dancing man himself, of a different sort, and had even fallen 'three-quarters' in love with a girl, but Cambridge Fellows were required to remain bachelors. Arguably, it was a kind of love, too, when, in November 1819, Sedgwick, Henslow and their friends sat down to establish the Cambridge Philosophical Society, solemnly vowing to 'keep alive the spirit of inquiry.'*

*"In the early 1800s, Cambridge was not the most exciting place to be. Caught in the tight web of religious orthodoxy, closed to Jews, Catholics and women alike, it was thought of as little more than a finishing school for future clergy. The founders of the new society decided that if Cambridge wasn't about to open up to the world, they would have the world come to Cambridge. Adopting Isaac Newton as their patron saint and limiting membership to graduates of the university, they weren't going to question the supremacy of mathematics enshrined in the curriculum. And yet, widening the horizons of inquiry, society members slowly dismantled old models of thought, replacing the natural philosopher of old with the more specialized 'scientist,' a term that was, as it happened, coined by one of the society's most prominent members, the Trinity College polymath William Whewell.*

*Meetings took place every second Monday during the term, from 7 p.m. to 9. Guests were welcome, including women, although they had to wait until later in the century to give lectures (and even longer to get full membership). Behind the arched windows of the society's headquarters at 2 All Saints Passage in Cambridge, lit by flickering gaslight, the world unfolded to the spellbound members as they peered at collections of shimmering butterflies, intricately shaped shells and outlandish fossils, or as they listened to lectures on topics ranging from Phoenician archaeology and celestial mechanics to the best ways of preventing railroad accidents. The society's peer-reviewed journal, Transactions of the Cambridge Philosophical Society, was dispatched to scientific institutions all over the world, in the hope that they would reciprocate by mailing their publications, which they did. In due course, the society's library and reading room, where, in Ms. Gibson's felicitous phrase, the 'ungentlemanly hogging of the newspapers' was frowned upon, became sites of excited discovery, too.*

*"Ms. Gibson rightly dwells on a signature moment in the society's history. At a meeting in November 1835, Henslow read young Charles Darwin's breathless letters from South America sharing stories about seashells found at elevations of thousands of feet and about the eerie stillness of the Andean Mountains, where it seemed as if the Earth's crust had cracked open just yesterday. Had the members realized that Henslow's friend was inching toward a theory that would upset everything they believed, they would have been far less pleased when Darwin returned to Cambridge a year later, laden with specimens and itching to talk about his exploits ('it went off very prosperously,' he bragged to his sister Caroline).*

*"Evolution, to the skeptical minds of these Cambridge savants, was poppycock, pure and simple. 'Before [a student] can reach that elevation from whence he may look down upon and comprehend the mysteries of the natural world,' Sedgwick intoned, 'his way is steep and toilsome, and he must read the records of creation, in a strange, and to many minds, a repulsive language, which rejecting both the senses and the imagination, speaks only to the understanding.' Once you had learned to use that language properly (and Sedgwick was talking about math, of course), the world was yours. In Sedgwick's skeptical view, Darwin had skipped more than a couple of steps on that arduous path toward enlightenment; the transmutation of species was nothing but a 'phrensied dream.' But when Sedgwick proceeded to lambaste Darwin in public, the mild-mannered Henslow pulled him back. By the turn of the century, society members were celebrating Darwin's memory.*

*"There is something quite heartening about a book buoyed by the unshakable belief that everything will come out all right in the end. The only serpent in Ms. Gibson's enchanted garden of discovery is the aptly named John Crouch, the society's dark-suited, live-in custodian until 1851, a character of Dickensian proportions, who had spent years quietly fiddling the books, diverting, for some unknown purpose, a significant portion of the society's funds his way. While Crouch's nefarious doings forced the society to give up its separate quarters, dissolve its collections and move into Cambridge University's New Museums building, this shift also led to greater cooperation between the society and the university, changing both of them for the better.*

*"Mostly, that is. Take the gigantic anthropometric project that would soon take shape in the society's new library, where thousands of undergraduates subjected themselves to procedures that measured their heads every which way, with the loosely eugenicist goal of finding correlations between head size and intelligence (read: high honors in college). Ms. Gibson charitably reads these efforts as the inevitable result of the honorable Cantabrigian impulse to drag math into*

*every field of knowledge. Fittingly, those dismal biometric records went missing for decades, until they were located in a tea chest at the university's zoology museum."*

The author concludes with a positive discussion of the admission of woman into the Society and a negative discussion of the nuclear research undertaken by some of its later members.