

My latest WeatherEye from John Maunder

Yearly temperatures-England-1700-2018

<https://www.sunlive.co.nz/blogs/12356-yearly-temperatures-england-17002018.html>

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Welcome to AMS News You Can Use.

Each week, we send out a sampling of recent news and items of interest in meteorology and related fields, as covered by various media outlets. Searchable archives are available online.

[You probably won't read this column about the biggest problem in the world right now | Will Bunch](#)

Philly.com - 07/29/2018

National Public Radio, in reporting 2018's wild weather events, has a hard and fast policy of NOT mentioning climate change unless a climate

[Hurricane season will demand more of all of us](#)

The Dallas Morning News - 07/29/2018

the Gulf are making hurricanes more common, and more intense. Weathering the coming storms will require long-term planning, and considering

[Puerto Rico mayor: Territory's profile has grown since hurricanes](#)

The Hill - 07/29/2018

suggested wiping out Puerto Rico's debt because of the steep recovery costs after Hurricane Maria. The White House has since walked back

[Climate change doesn't look like much of a hoax this summer](#)

StarTribune.com - 07/28/2018

a world that no longer exists," said Martin Hoerling, a research meteorologist at the National Oceanic and Atmospheric Administration. It's

'Severe Drought' Present In Western Oregon, Southwest Washington

Oregon Public Broadcasting - 07/27/2018

Dello, associate director of the Oregon Climate Change Research Institute. The weekly drought report, a snapshot of current conditions,

Drought and heat exacerbate wildfires

ReliefWeb - 07/27/2018

hazards that is in the scope of WMO's High-Impact Weather Project (HIWeather). This research project works, on the one hand, on improving

Heatwaves from the Arctic to Japan: a sign of things to come?

Yahoo! News - 07/27/2018

of the WMO. A study published in the Bulletin of the American Meteorological Society concluded in December that global warming was solely

Mars and Saturn Photographed Near Opposition

Sci-News.com - 07/27/2018

images from Hubble show that Earth isn't the only planet where intense spring and summer storms wreak havoc. "It's now summertime in the

Storms, intense heat and humidity is bringing out all the desert pests

KTNV ABC Channel 13 - 07/27/2018

Storms, intense heat and humidity is bringing out all the desert pests

Phoenix officials use trees to fight 'urban heat island' effect

Las Vegas Review-Journal - 07/26/2018

and a faculty affiliate of the Urban Climate Research Center, works on a weather station installation in the Aeroterra Apartment community

Flood detection a surprising capability of microsatellites mission

ScienceDaily - 07/26/2018

cyclones as part of an effort to increase data coverage of hurricanes and aid forecasts. As the first year of data is being evaluated, a new

Carbon tax will save you money

The Hill - 07/26/2018

“in the coming decade, economic losses from extreme weather combined with the health costs of air pollution [will] spiral upward to at least

Most Beautiful Weather Events in Photos

MSN.com - 07/26/2018

National Oceanic & Atmospheric Administration, records both satellite and ground images of meteorological events and maintains an archive of

Indo Hammered by Biggest Swell in Living Memory

Surfline.com - 07/26/2018

never really know with mother nature. A series of very large/intense storms have been running rampant over the past couple weeks, pushing

Most of Mars' Dust Comes From One Special Area

Smithsonian.com - 07/26/2018

and enters Mars' atmosphere, it could make planetary dust storms more frequent or more intense. Currently we don't know what sets off these

Europe may thrive on renewable energy despite unpredictable weather

EurekAlert! - 07/26/2018

how long-term weather patterns affect wind and solar renewable energy technologies across Europe. Using 30 years of meteorological data, the

Weather Plays a Role in Ride the Ducks Tragedy: How we receive & perceive severe warnings

MFA News Network - 07/26/2018

out these resources from the American Meteorological Society:
<https://www.ametsoc.org/index.cfm/ams/about-ams/ams-statements/statements-of->

The outer limits: New satellite to probe solar system's edges

University of Colorado Boulder - 07/26/2018

how LASP brings together solar science, planetary science, astrophysics and research on space weather," he said. Artist's rendition of the

How extreme summer heat affects your body and brain

MSN.com - 07/25/2018

illness, asthma, and emphysema. Non-ozone air pollution linked to warmer weather will also increase rates of lung cancer, allergies and

House Committee Approves Space Weather Bill

Space.com - 07/25/2018

on a voice vote an amended version of S.141, the Space Weather Research and Forecasting Act. That bill was introduced in the Senate in

Behind the Front: Snowmagedon – What went wrong?

WBRC FOX6 News - 07/25/2018

January 28th, 2014. To many people that was just a Tuesday – but the folks of Alabama know it by a different name – Snowmagedon.

Most Americans are Unprepared for Natural Disasters, Despite High-Tech Solutions

WAFB.com - 07/25/2018

major natural disasters, from hurricanes and tornadoes to blizzards and wildfires, with collective recovery costs of more than \$300 billion¹

Why didn't National Weather Service say my storm was severe?

9News.com - 07/24/2018

the criteria must remain consistent. Making a policy change isn't easy, so the National Weather Service office in Boulder will make

On the Front Lines of America's War on Fire

Men's Journal Magazine - 07/24/2018

after fires, floods, tornadoes, and hurricanes, but that figure doesn't approach the total costs, which the National Oceanic and Atmospheric

Pakistan is ground zero for global warming consequences

Ventura County Star - 07/24/2018

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Perspectives

Making carbon pricing work for citizens pp669 - 677

David Klenert, Linus Mattauch, Emmanuel Combet, Ottmar Edenhofer, Cameron Hepburn et al.

doi:10.1038/s41558-018-0201-2

Ambitious carbon pricing reform is needed to meet climate targets. This Perspective argues that effective revenue recycling schemes should prioritize

behavioural considerations that are aimed at achieving greater political acceptance.

[Appraising geodiversity and cultural diversity approaches to building resilience through conservation pp678 - 685](#)

Chris Knudson, Kelly Kay & Scott Fisher

doi:10.1038/s41558-018-0188-8

This Perspective draws on two case studies to examine geodiversity and cultural diversity approaches to conservation currently used by US land trusts, and their complementary strengths and weaknesses in fostering climate resilience.

[Current understanding and challenges for oceans in a higher-CO2 world pp686 - 694](#)

Catriona L. Hurd, Andrew Lenton, Bronte Tilbrook & Philip W. Boyd

doi:10.1038/s41558-018-0211-0

Ocean acidification, a result of increased levels of CO₂, impacts the marine environment and its biology. This Perspective presents the current understanding of the issue and highlights future directions for research.

Letters

[The threat of political bargaining to climate mitigation in Brazil pp695 - 698](#)

Pedro R. R. Rochedo, Britaldo Soares-Filho, Roberto Schaeffer, Eduardo Viola, Alexandre Szklo et al.

doi:10.1038/s41558-018-0213-y

Political bargaining has the potential to reverse Brazil's deforestation control efforts. Integrated assessment modelling shows that weaker environmental governance threatens the country's ability to achieve emissions consistent with a 2 °C goal.

[Risk of increased food insecurity under stringent global climate change mitigation policy pp699 - 703](#)

Tomoko Hasegawa, Shinichiro Fujimori, Petr Havlík, Hugo Valin, Benjamin Leon Bodirsky et al.

doi:10.1038/s41558-018-0230-x

Economy-wide GHG emissions reductions may negatively affect food security. Stringent mitigation policies, modelled as carbon prices, are shown to lead to an increase in production costs, food prices and the population's risk of hunger.

Antarctica's ecological isolation will be broken by storm-driven dispersal and warming pp704 - 708

Ceridwen I. Fraser, Adele K. Morrison, Andrew McC Hogg, Erasmo C. Macaya, Erik van Sebille et al.

doi:10.1038/s41558-018-0209-7

Genomic tools and ocean circulation models show that organisms surface-drift across the Southern Ocean frequently. The extreme cold therefore keeps Antarctica biologically isolated, but as the climate warms new species may establish quickly.

Ocean warming alleviates iron limitation of marine nitrogen fixation pp709 - 712

Hai-Bo Jiang, Fei-Xue Fu, Sara Rivero-Calle, Naomi M. Levine, Sergio A. Sañudo-Wilhelmy et al.

doi:10.1038/s41558-018-0216-8

The growth of nitrogen-fixing marine cyanobacteria *Trichodesmium* is limited by iron availability under current conditions. However warmer temperatures reduce the iron requirement, allowing greater growth rates and increased nitrogen fixation.

Extinction risk from climate change is reduced by microclimatic buffering pp713 - 717

Andrew J. Suggitt, Robert J. Wilson, Nick J. B. Isaac, Colin M. Beale, Alistair G. Auffret et al.

doi:10.1038/s41558-018-0231-9

Topographic variations result in microclimatic heterogeneity that can substantially reduce extinction risk from climate change, according to a study of 430 climate-threatened and range-declining species in England.

Threat of climate change on a songbird population through its impacts on breeding pp718 - 722

Thomas W. Bonnot, W. Andrew Cox, Frank R. Thompson & Joshua J. Millspaugh
doi:10.1038/s41558-018-0232-8

Individual and metapopulation models together project that—under an unabated climate change scenario—warming could reduce breeding productivity of a currently abundant songbird enough to pose a risk of quasi-extinction this century.

Articles

Higher temperatures increase suicide rates in the United States and Mexico
pp723 - 729

Marshall Burke, Felipe González, Patrick Baylis, Sam Heft-Neal, Ceren Baysan et al.
doi:10.1038/s41558-018-0222-x

A 1 °C increase in monthly average temperature is associated with higher suicide rates in the United States and Mexico. Combined with comparable analysis of depressive language in US Twitter updates, these results suggest a link between higher temperatures and mental well-being.

Recent poleward shift of tropical cyclone formation linked to Hadley cell expansion pp730 - 736

S. Sharmila & K. J. E. Walsh
doi:10.1038/s41558-018-0227-5

It has been suggested that tropical cyclones have migrated polewards in recent decades. Analysis of observational and reanalysis data suggests that this migration may be linked to an expansion of the Hadley cell and the changes in vertical atmospheric stability.

Near-future CO₂ levels impair the olfactory system of a marine fish pp737 - 743

Cosima S. Porteus, Peter C. Hubbard, Tamsyn M. Uren Webster, Ronny van Aerle, Adelino V. M. Canário et al.
doi:10.1038/s41558-018-0224-8

Marine fishes exposed to elevated CO₂ levels can have altered responses to sensory cues. Research now reveals a physiological and molecular mechanism in

the olfactory system that helps to explain this altered behaviour under elevated CO2.

Carbon-focused conservation may fail to protect the most biodiverse tropical forests pp744 - 749

Joice Ferreira, Gareth D. Lennox, Toby A. Gardner, James R. Thomson, Erika Berenguer et al.

doi:10.1038/s41558-018-0225-7

Biodiversity is positively associated with carbon density in highly disturbed tropical forests, but this relationship breaks down in relatively undisturbed areas. Consequently, carbon conservation schemes can fail to protect the most ecologically valuable forests.

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