Macro Roundup Article

Headline: 2021 North American Heatwave Amplified by Climate Change-Driven Nonlinear Interactions

Article Link: https://www.nature.com/articles/s41558-022-01520-4

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Summary: We find that slow- and fast-moving components of the atmospheric circulation interacted, along with regional soil moisture deficiency, to trigger a 5-sigma heat event. Its severity was amplified by ~40% by nonlinear interactions between its drivers, probably driven in part by land-atmosphere feedback catalyzed by long-term regional warming and soil drying. Since the 1950s, global warming has transformed the peak daily regional temperature anomaly of the event from virtually impossible to a presently estimated ~200-yearly occurrence. Its likelihood is projected to increase rapidly with further global warming, possibly becoming a 10-yearly occurrence in a climate 2 °C warmer than the pre-industrial period, which may be reached by 2050.

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