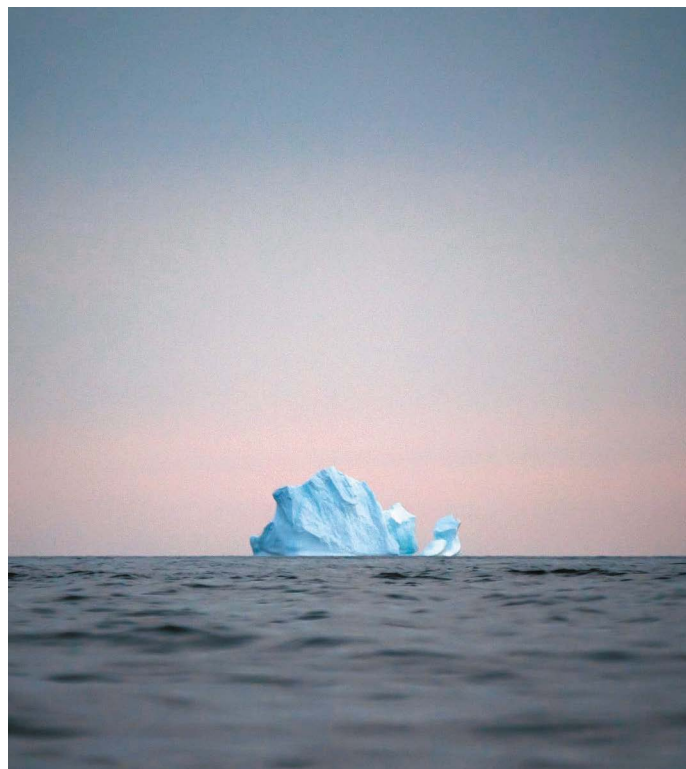




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EVEN THE ARCTIC IS EXPERIENCING MORE MARINE HEATWAVES



An iceberg in the Arctic, where marine heatwaves are on the rise.

Ocean 'heatwaves' are becoming increasingly common even in the frigid Arctic, where these events are more extreme, and possibly more damaging, than those in warmer seas farther south.

Climate warming means that marine heatwaves – extended periods during which ocean temperatures soar – are becoming more frequent and severe, threatening aquatic species and ecosystems unaccustomed to prolonged warm spells. The Pacific, Atlantic and Indian oceans are all feeling the squeeze, but few studies exist on the strength of heatwaves in the Arctic Ocean.

Boyin Huang at the US National Oceanic and Atmospheric Administration in Asheville, North Carolina,

and Zhaomin Wang at Hohai University in Nanjing, China, together with their colleagues, analysed records of sea surface temperatures in the Arctic from 1982 to 2020. They found that extreme warm spells have become more frequent and long-lasting, and that ocean-temperature anomalies are even more pronounced in the Arctic than in tropical and subtropical regions.

Rapidly rising air temperatures in the Arctic and the associated retreat of sea ice both seem to contribute to amplified marine heatwaves in the region's seas, the researchers say.

Geophys. Res. Lett. **48**,
e2021GL095590 (2021)

SECRETS OF THE WOBBLY BRIDGE'S INFAMOUS SHIMMY

Crossing the River Thames was never more rhythmic than it was on 10 June 2000, when London's Millennium Bridge opened and then visibly rocked as pedestrians ambled across. The bridge's motion has been cited as evidence of the dangers of synchronized walking – everyone seemed to move in unison, supposedly tapping into the resonant frequency of the bridge and causing it to sway.

But a study now bolsters an alternative idea: that pedestrians' natural walking behaviour was enough to cause the bridge to wobble. This motion, in turn, made it look as if everyone was walking in step.

Igor Belykh at Georgia State University in Atlanta and his colleagues modelled the physics of bridge crossing and found that a large-enough crowd can get a bridge rocking regardless of how synchronized individuals' steps are. Moreover, the swaying becomes worse as walkers adjust their gaits to keep their footing, adding more energy to the swinging system.

The findings hint that, with enough people crossing at a time, certain bridges could be unstable over a larger range of frequencies than other models suggest, the team says.

Nature Commun. **12**, 7223 (2021)



DARWIN'S FINCHES BATTLE A VAMPIRE BY SITTING STILL

Some of the small songbirds known as Darwin's finches might protect their young from flesh-eating parasites just by staying in the nest.

The more than a dozen bird species that astonished Charles Darwin on the Galapagos Islands are icons of evolutionary biology, but they are under threat from the avian vampire fly (*Philornis downsi*), an introduced parasite that lays its eggs in nests. Once the birds hatch, *P. downsi* larvae crawl into their beaks to feast on the baby birds' flesh and blood. On average, *P. downsi* infestations kill 55% of young birds each year.

To understand how parents protect their broods, Sonia Kleindorfer at the University of Vienna and her colleagues gathered data, spanning 21 years, from more than 200 nests of finches of the *Camarhynchus* and *Geospiza* genera (pictured, *Geospiza fuliginosa*). After the fledglings flew the coop, the researchers counted the number of *P. downsi* larvae in the discarded nest.

The team found fewer larvae in the nests in which female finches spent the longest time brooding the hatchlings. This correlation was strongest when the male nesting partner provided food deliveries, allowing the female to stay put.

Proc. R. Soc. B **288**, 20211668 (2021)