## Best of Last Week—Frog saunas prevent disease, using LLMs to stop deepfakes, vitamins do not prevent death

July 1 2024, by Bob Yirka



Green and gold bell frogs in artificial hotspot shelter. Credit: Anthony Waddle

It was a good week for biology research, as a team of environmental scientists at the University of Wisconsin–Madison found that wolves reintroduced to Isle Royale temporarily affected other carnivores, while humans had a more significant impact on the lives of other carnivores. The wolves were reintroduced to the remote island in Lake Superior to

help rebalance the ecosystem there. Also, an international team of geologists, paleo-scientists and ancient biology specialists report that several <u>trilobite fossils found in Morocco</u> are among the most pristine samples ever found. Their study led to a shakeup of the scientific understanding of the long extinct group. And a collaboration between teams from Macquarie University and the University of Melbourne reports that <u>frog "saunas"</u> helped endangered frogs survive the devastating impacts of a deadly fungal disease that has been wiping out frogs in other areas.

In technology news, a small team of mathematicians and computer scientists from the U.S. and Switzerland developed the <u>fastest possible</u> <u>flow algorithm</u>—tackling the question of how to achieve the maximum flow in a network while simultaneously minimizing transport costs. And a team of AI researchers from the U.S. and China explored the possibility of using <u>ChatGPT</u> or other <u>LLMs</u> to identify and stop the distribution of deepfake images. They found the approach was not as good as other systems, but might improve with further refinement. Also, a team of telecommunications specialists at Korea Research Institute of Standards and Science developed a <u>domestic 6G</u> antenna measurement <u>system</u> for use in South Korea that could become a standard for international global communications. And a combined team of environmental scientists from Princeton University and UCLA report that it should be possible to <u>use common plastics</u> to passively cool and heat buildings when the seasons change.

In other news, a team of medical researchers conducting groundbreaking research at the Hospital for Sick Children in Toronto Canada, report that gene therapy halted the progression of a rare disease in a young patient. Also, an international team of space scientists studying data from the James Webb Space Telescope observed tiny bright objects from the dawn of the universe. And finally, a team of health specialists led by researchers at the National Institutes of Health's National Cancer

Institute, found that <u>taking multivitamins daily</u> does not correlate with a lower risk of death.

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Citation: Best of Last Week—Frog saunas prevent disease, using LLMs to stop deepfakes, vitamins do not prevent death (2024, July 1) retrieved 6 July 2025 from <a href="https://sciencex.com/news/2024-07-week-frog-saunas-disease-llms.html">https://sciencex.com/news/2024-07-week-frog-saunas-disease-llms.html</a>

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