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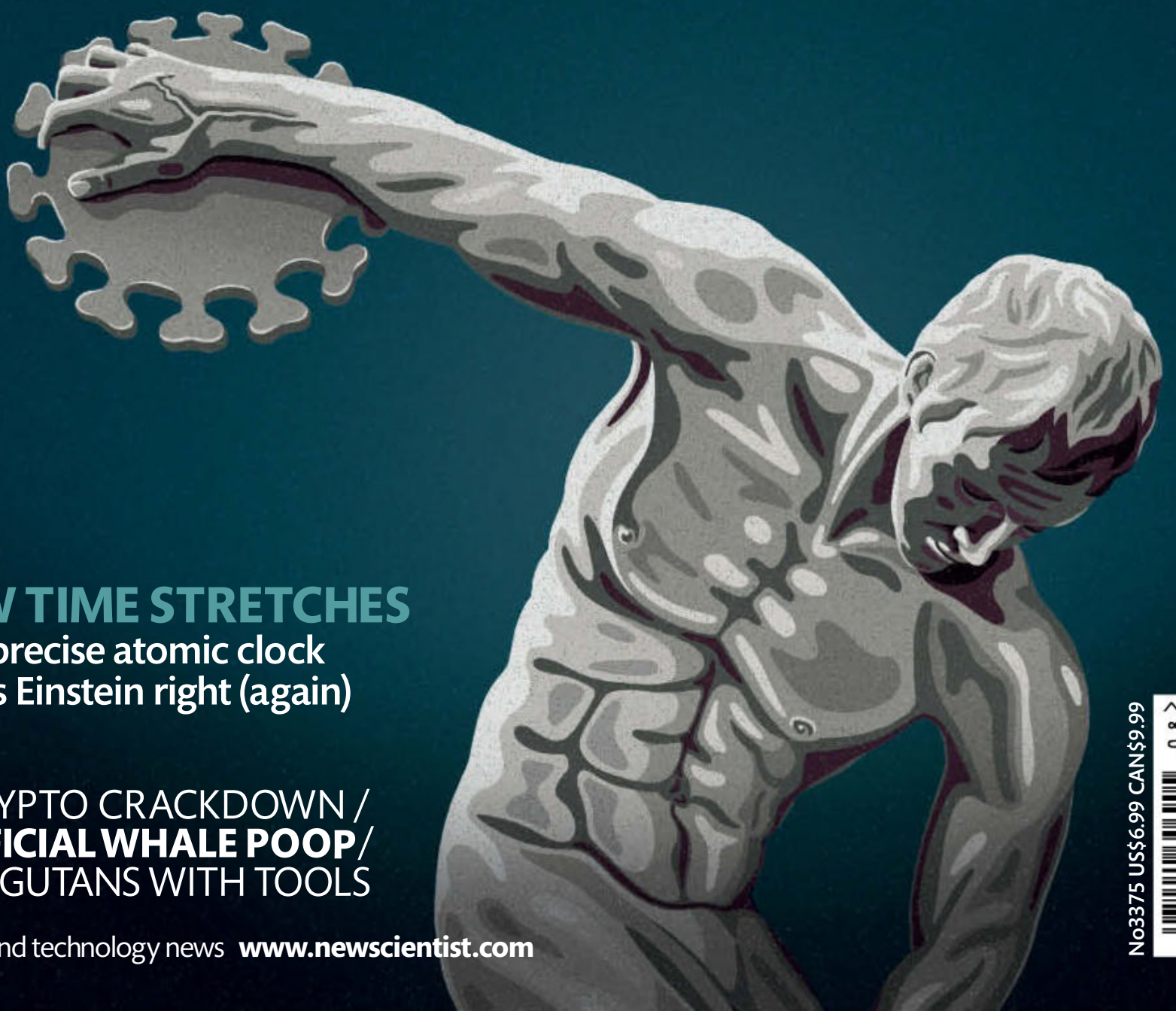

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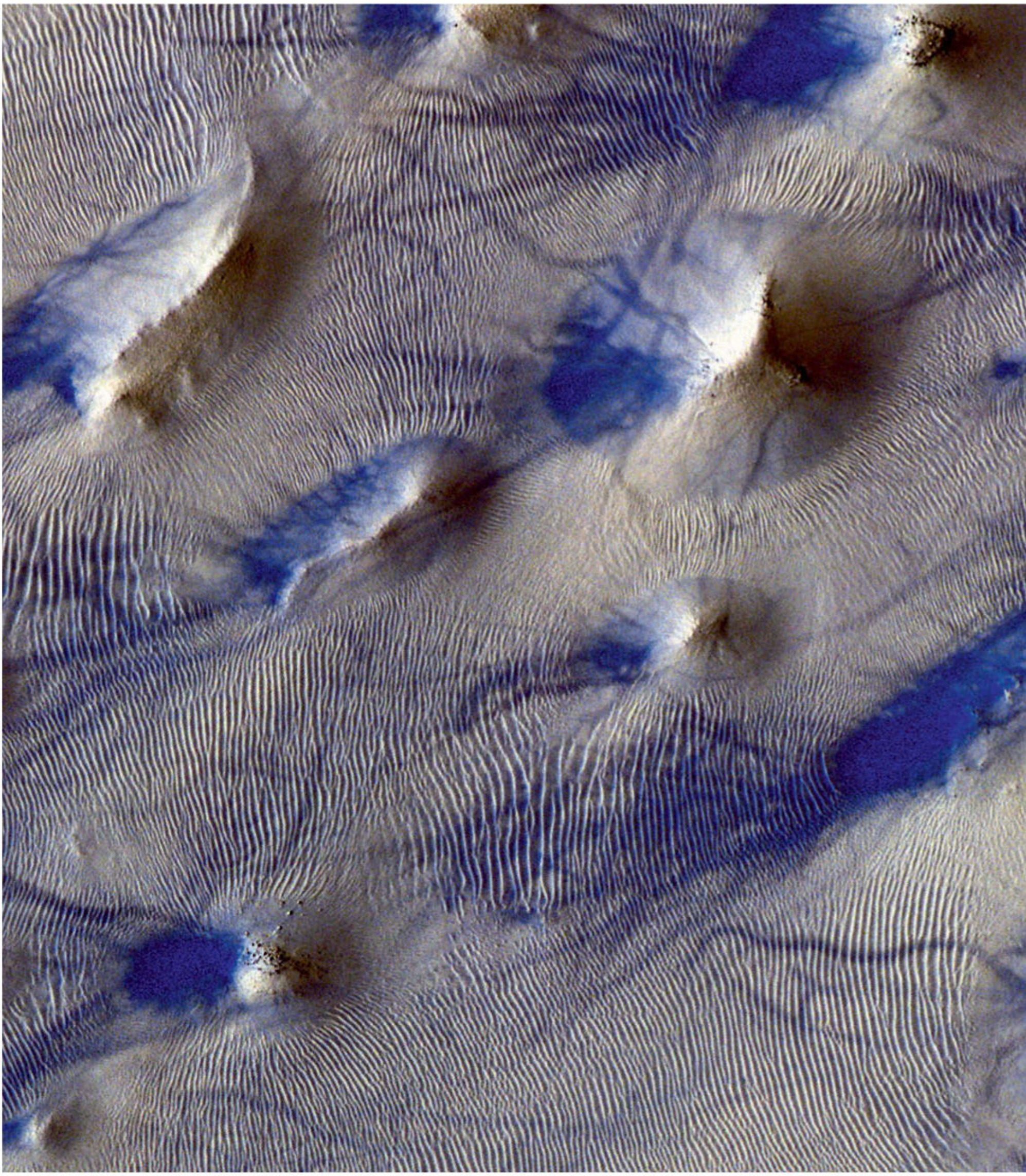

Bedevilled Mars

Photograph ESA/Roscosmos/CaSSIS

THIS intriguing landscape is one of the latest images of the surface of Mars. It was captured by the Colour and Stereo Surface Imaging System (CaSSIS) on board the ExoMars Trace Gas Orbiter (TGO). The orbiter is part of the ExoMars programme, a collaboration between the European Space Agency and Roscosmos, Russia's space agency.

This patch of terrain near the Hooke crater in Mars's southern highlands resembles "chaotic terrain" – regions of haphazardly clumped rocks seen across the planet – although it hasn't yet been classified as such.

The wispy blue threads are tracks caused by little whirlwinds known as dust devils that twist through the Red Planet's thin atmosphere. They occur when warm air rises through cooler air.

In reality, though, these tracks aren't blue. The colouring of the image appears particularly otherworldly partly because it is an infrared image, but also because multiple filters were combined to be highly sensitive to variation in the surface minerals that dust devils whip up and leave in their wake.

One of the ExoMars programme's objectives is to look for signs of past and present life on the planet. To this end, aside from snapping photos of Mars, the TGO is also searching for evidence of atmospheric gases such as methane, which can potentially indicate biological activity, and mapping water-rich regions of the planet.

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