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# Science Focus

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### CASSIOPEIA A

The emerald horseshoe shape lurking near the centre of this image is known as the 'Green Monster'. And with good reason: it's enormous – around 10 light-years wide, according to estimates. To put that figure in context, consider that Proxima Centauri, the next nearest star to Earth (after the Sun), lies around four light-years away.

The Green Monster was discovered in data collected by the James Webb Space Telescope (JWST) in April 2023. It sits in Cassiopeia A (Cas A), the wreckage of a massive star in the Cassiopeia constellation that exploded around 340 years ago creating the supernova remnant we see today.

By combining data from the JWST and the Chandra X-ray Observatory, astronomers have been able to uncover new details about the Green Monster's creation. They think a powerful shockwave was unleashed when Cas A went supernova, slamming into debris the star had already lost. The energy in the shockwave was enough to heat the debris, pushing it outwards in a searing hot ball of matter and light, to gradually form the horseshoe shape visible here.

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