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Vanishing megalakes in central Australia coincided with megafaunal extinction ∼48 ka

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Central to the debate over the extinction of many of Australia's last surviving megafauna is the question: Was climate changing significantly when humans arrived and megafauna went extinct? In North America and Eurasia the presence of major climate change suggests that megafaunal extinction resulted from humans acting in concert with profound environmental transformation. Yet, the simpler scenario of an entirely human-driven extinction has been largely retained in Australia because significant climate change has not been documented previously for the overlapping period in which humans arrived (60–40 ka) and megafauna went extinct (51–40 ka). Here we show that previously overflowing megalakes began a final catastrophic drying phase at 48 $\pm$ 2 ka at the same time as the extinction of the giant bird, *Genyornis newtoni*, between 50 – 45 ka. Our findings, based on terrestrial archives from Australia's largest drainage basin, argue for a re-evaluation of the validity of a solely human cause for such extinctions.