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## Location of the River Euphrates in the Late Miocene dating of terrace gravel at Shireen, Syria

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**Abstract.** We report gravel of the River Euphrates, capped by basal Ar-Ar dated to ~9 Ma, at Shireen in northern Syria. This gravel, preserved by the erosion-resistant basalt, allows us for the first time to record the history of this major river during the Late Miocene. In response to progressive regional surface uplift, the Euphrates extended SE by ~100 km between the early Middle Miocene, when the coast was near Kahramanmaraş in southern Turkey, and the Pliocene, when it lay ~100 km west of western Iraq, east of the Arabian Platform uplands.

[Final Revised Paper](#) (PDF, 8387 KB) [Supplement](#) (4779 KB) [Discussion Paper](#) (eED)

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