

Graphic detail

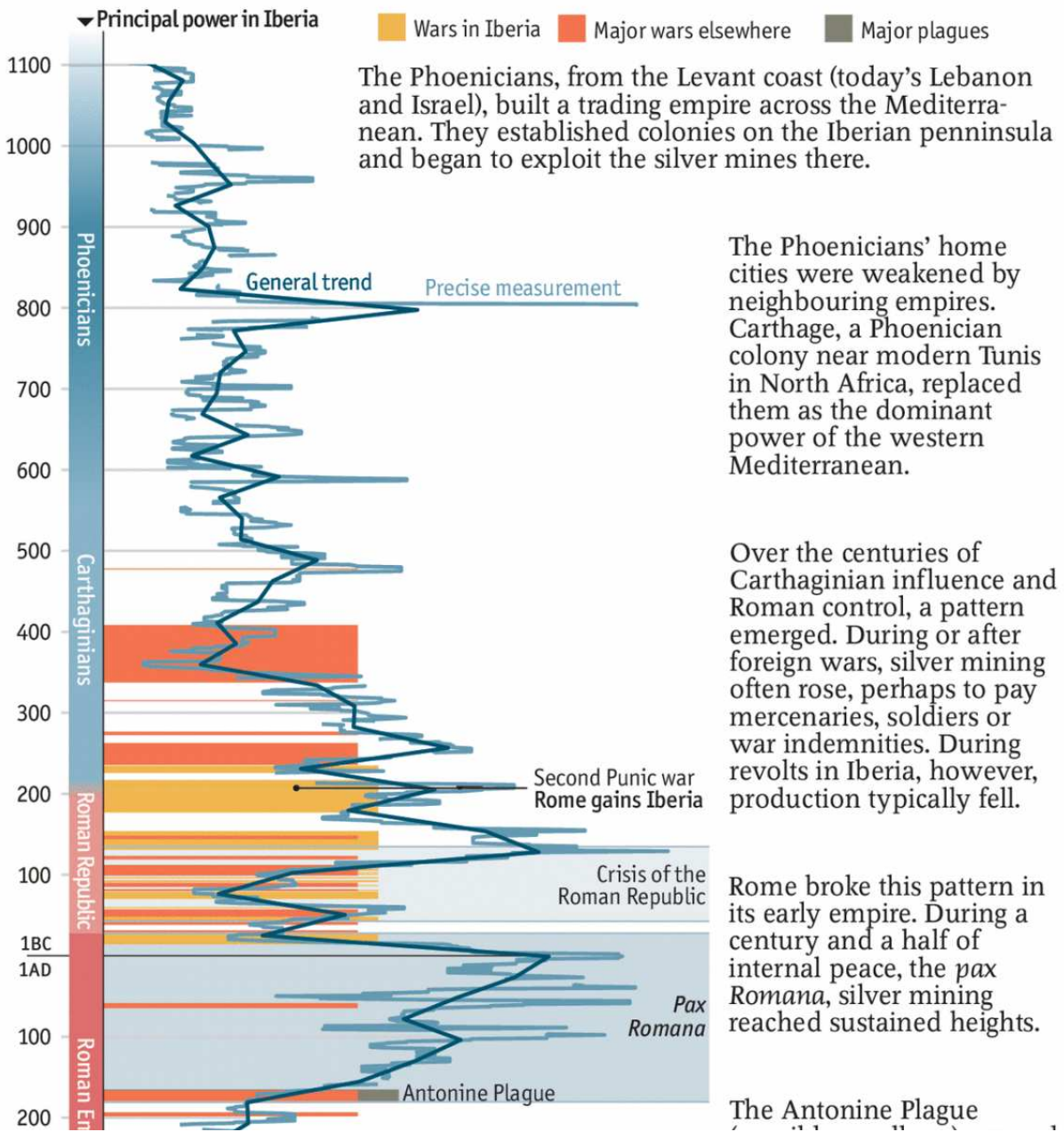
Daily chart

A record of ancient Rome's economy turns up in a glacier in Greenland

A detailed investigation of lead in ice core samples tracks the main supply of Roman money

Treasure beneath the ice

Lead emissions, Greenland glacial-core samples
Micrograms per square metre per year



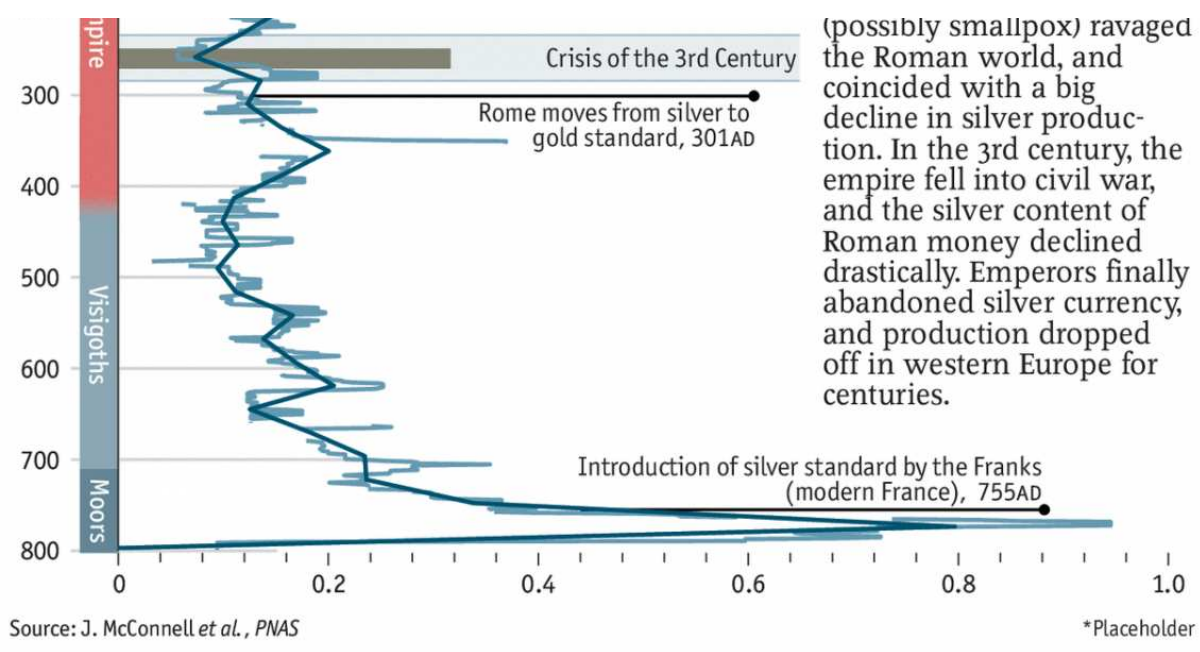
The Phoenicians, from the Levant coast (today's Lebanon and Israel), built a trading empire across the Mediterranean. They established colonies on the Iberian peninsula and began to exploit the silver mines there.

The Phoenicians' home cities were weakened by neighbouring empires. Carthage, a Phoenician colony near modern Tunis in North Africa, replaced them as the dominant power of the western Mediterranean.

Over the centuries of Carthaginian influence and Roman control, a pattern emerged. During or after foreign wars, silver mining often rose, perhaps to pay mercenaries, soldiers or war indemnities. During revolts in Iberia, however, production typically fell.

Rome broke this pattern in its early empire. During a century and a half of internal peace, the *pax Romana*, silver mining reached sustained heights.

The Antonine Plague



Economist.com

Graphic detail

May 16th 2018 | by THE DATA TEAM

SILVER mining in antiquity was a dreadfully unpleasant business. Galena, a silver-bearing lead ore mined in Europe, mostly in Iberia, was crushed and heated for hours to yield its silver. The process was nasty but necessary: silver was the main coin of the Mediterranean region, and especially the Roman world. Romans (or, rather, their slaves) worked the mines on an unprecedented scale.

While this silver was crossing palms across Europe, lead fumes from the smelting rose into atmospheric currents that carried them over Greenland, where they settled onto glaciers and were trapped in the ice. This is where climate researchers found them.

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Not all the lead trapped in the glacier comes from silver mining, but much of it does. Based on these lead levels, researchers can make an educated guess about the intensity of silver production in western Europe.

Sources from antiquity are full of stories of politics, intrigue, and war, but often sparse

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on the details of everyday life—much less national accounts. And while Rome's history is well-documented, that of Carthage and Phoenicia is virtually

unknown. These data provide a new window onto the workings of the ancient economy. Few historians would have gone to Greenland to look for insight into the Mediterranean world. But it turns out it was there all along.

