

BOOKS *et al.*

ENGINEERING

A monumental challenge

Erecting an Egyptian obelisk is no small feat

By Andrew Robinson

“If you had to pick the most remarkable object ever produced in ancient Egypt, what would you choose?” asks Egyptologist Bob Brier at the beginning of *Cleopatra’s Needles*. Tutankhamun’s gold mask? The bust of Queen Nefertiti? The Great Pyramid? The Rosetta Stone? Brier’s choice is a massive, unfinished granite obelisk lying on its side in a quarry in Aswan, still encircled by grooves scraped by ancient Egyptian laborers. Almost 42 meters in length, and weighing more than 1000 tons—more than two jumbo jets—it would have been the largest obelisk ever, had it not cracked before it could be freed from its surrounding rock some 3500 years ago. “I have been to the quarry more than 100 times and every time I am amazed,” writes Brier. “How were they going to move it? Stand it up?” Despite almost a century of research, the answers remain unclear.

So prized by the ancient Romans were Egyptian obelisks that, at one time, more of them stood in Rome than in Egypt. In the Middle Ages, most fell and lay buried until their reerection during the Italian Renaissance.

That is, except for one, which is perhaps the most famous.

Weighing 320 tons, the structure that many now know as the Vatican Obelisk was transported in a specially constructed ship powered by three tiers of hundreds of oarsmen from Alexandria to Rome by the emperor Caligula in about CE 37. It was erected in the Vatican Circus, where it stood until 1586, when it was laboriously shifted to the square in front of St. Peter’s Basilica and reerected with a Christian cross on its tip. This celebrated engineering operation was directed by the architect of St. Peter’s, Domenico Fontana, on the orders of Pope Sixtus V.

In the 19th century, France, Britain, and

the United States—inspired by Napoleon Bonaparte’s expedition to Egypt in 1798—acquired their own major obelisks from Alexandria and Luxor. The monuments were erected in Paris’s Place de la Concorde, on London’s Thames embankment, and in New York’s Central Park. Other ancient Egyptian obelisks can be found in Florence, Istanbul, Munich, and a country estate in southern England. The last is a small one from Philae inscribed with the names Ptolemy and Cleopatra, which happened to prove vital in



Work on the Aswan obelisk was suspended when cracks appeared in the granite.

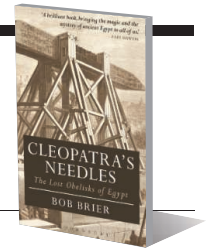
the 1820s decipherment of the Egyptian hieroglyphs by Jean-François Champollion (a keen advocate for the Paris obelisk).

Brier’s relatively brief book, illustrated with period drawings and photographs of the innovative contraptions and procedures required to move the obelisks, is chronological. It begins with a chapter on the engineering challenges faced by the ancient Egyptians and their putative solutions, moves on to the obelisks of Rome, with a separate chapter on the Vatican obelisk, and then recounts the stories behind the acquisition, transport, and erection of the Paris, London, and New York obelisks. Although some of this history was covered in a recent study by art historians (*1*), Brier brings an Egyptologist’s perspective, a fascination with engineering, considerable storytelling skills, and a conversational tone honed by

Cleopatra’s Needles The Lost Obelisks of Egypt

Bob Brier

Bloomsbury Academic,
2016. 238 pp.



professional broadcasting. Together, this makes for a generally enjoyable read.

As he intriguingly observes, “it seems that as technology advanced, moving obelisks became more difficult.” The ancient Egyptians kept largely silent on the subject, apart from a single depiction of an obelisk lying on a Nile barge. Likewise, it seems that the ancient Romans felt that the transportation and erection of these cumbersome structures were hardly worth recording.

Yet when Fontana moved the Vatican obelisk in the 16th century, it was treated as “one of the engineering triumphs of the Renaissance” and celebrated with

a lavishly illustrated publication (including depictions of the first “hard hats”). In the 19th century, the drama increased still further, with extensive coverage in the *Illustrated London News* of the London obelisk’s disaster-prone journey from Egypt, during which six seamen lost their lives. A parade of 8500 Freemasons (who were convinced that the pedestal carried Masonic emblems) heralded the New York obelisk’s arrival in 1880. “This only increases my admiration for the ancient Egyptian engineers who erected dozens and dozens of obelisks with just rope, wood, and sand,” observes Brier.

The book’s only serious weakness—apart from the indifferent reproduction of some illustrations—is to underplay the obelisks’ hieroglyphic inscriptions. There is no reference to the importance of the Coptic language, no discussion of the Philae obelisk, and only a passing mention of the Rosetta Stone. In Brier’s view, “It is the obelisk people remember, not the inscriptions.” No doubt the ancient Romans agreed, given their own neglect of hieroglyphics. (The same goes for America’s best-known obelisk, the Washington Monument.) Yet if, like the Romans, we were still unable to read the hieroglyphic script, how much could we really understand about the obelisks?

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