

The Submerged Archaeological Remains of Ostia and Portus

Peter B. Campbell, Cranfield University

Stephen Kay, British School at Rome

Elena Pomar, British School at Rome

www.cranfield.ac.uk

The Portus Project and Tiber Survey

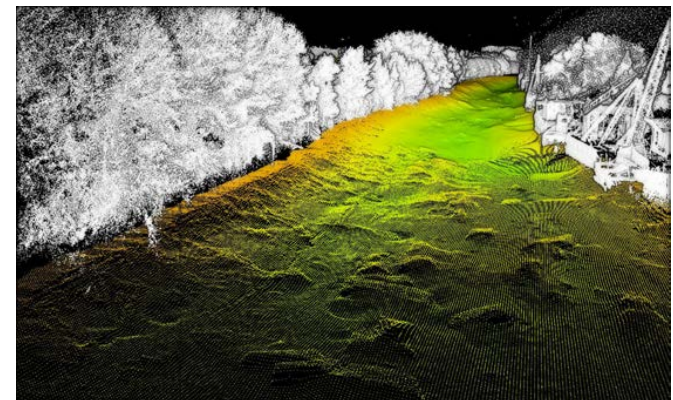
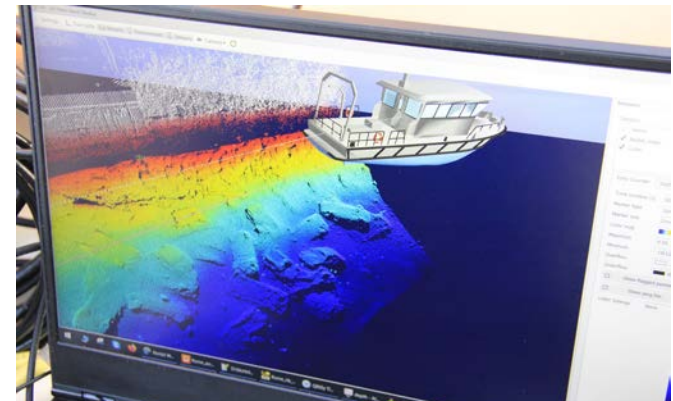
- Collaborative maritime survey between the Parco Archeologico di Ostia Antica (PAO) and the British School at Rome (BSR) (Prot. n. 5060)
 - Director Mariarosaria Barbera and maritime archaeologist Dott.ssa Alessandra Ghelli, and current director Alessandro D'Alessio
- Portus Project (2007-2021)
 - Multiple data types for terrestrial sections of Ostia, Portus, and Isola Sacra including geophysics, geoarchaeology, field survey and excavation, and 3D data (LiDAR, photogrammetry, and laser scanning)
 - Integration of terrestrial and underwater geophysics data
- There are two types of underwater deposits evident in the lower Tiber
 - Deposits in the ancient river course consisting of maritime infrastructure, shipwrecks, and artefacts dropped or discarded
 - Terrestrial deposits submerged during the river's course changes, especially the Fiume Morto shift in 1557



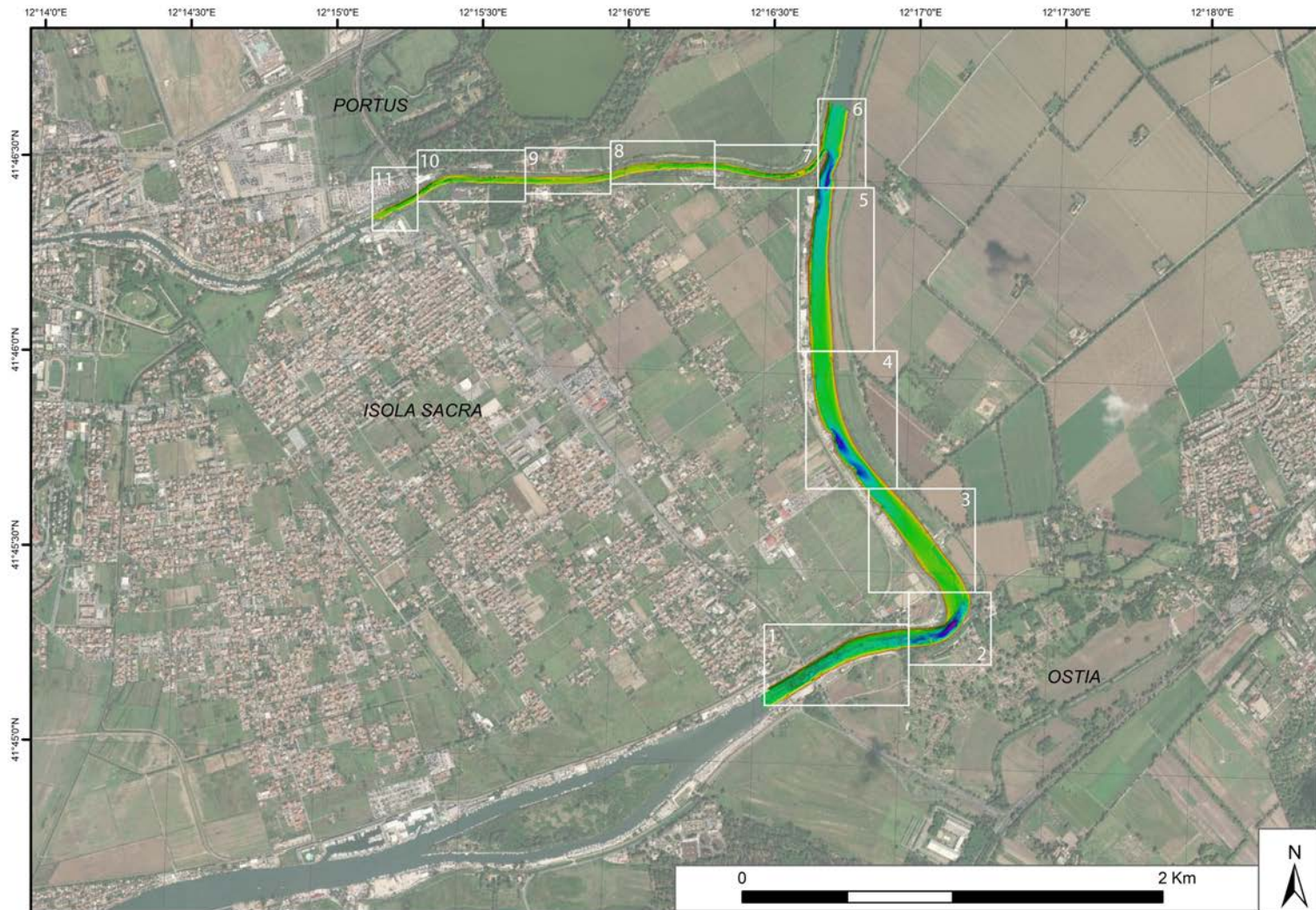
In memory of Professor Simon Keay

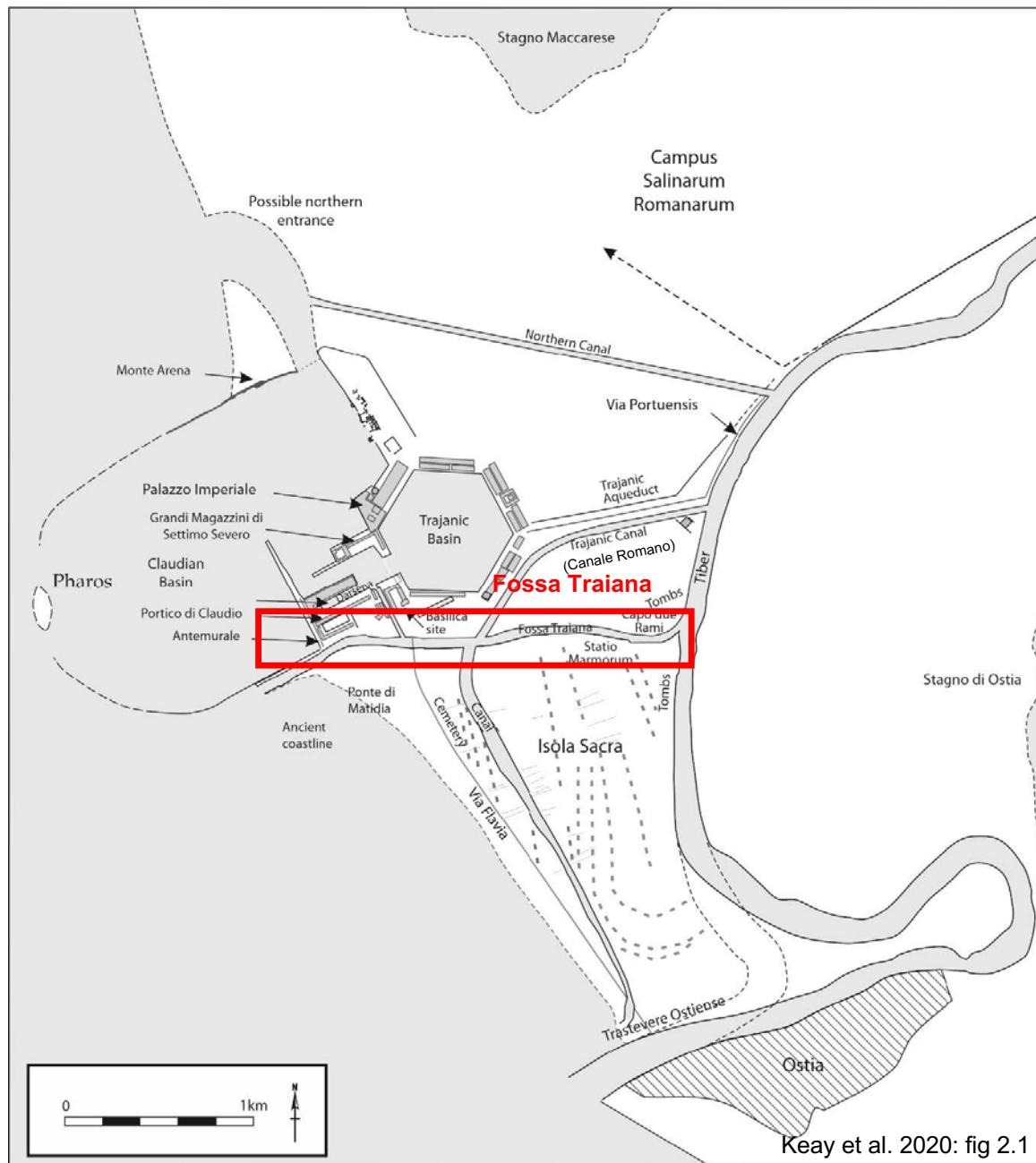
Methodology

- The total area surveyed was 2.27km in the Fossa Traiana and 3.66km in the Tiber.
- 400 kHz Norbit iWBMS multibeam echosounder (MBES) with side-mounted LiDAR.
 - The MBES has 512 beams and records bottom backscatter and water column intensity data.
 - The side-mounted LiDAR captured 3D point cloud data on coastal features above the water, including archaeological remains along the river's edge.
 - 428 anthropogenic anomalies appear in the Fiumara Grande and 349 in the Fossa Traiana. The maximum depth is 9m and the average is 5m.
- Remotely Operated Vehicle (ROV), a modified BlueROV designed by CAP Project for working in riverine environments. It has a forward-facing 1080p camera. Tiber visibility is 30cm with 2 knot current.
- Due to COVID19, no diving operations were undertaken in subsequent months (February 2019).
- Integration with terrestrial geophysics, LIDAR, and satellite imagery and the marine geophysics.



Survey Area





Area 3: Fossa Traiana



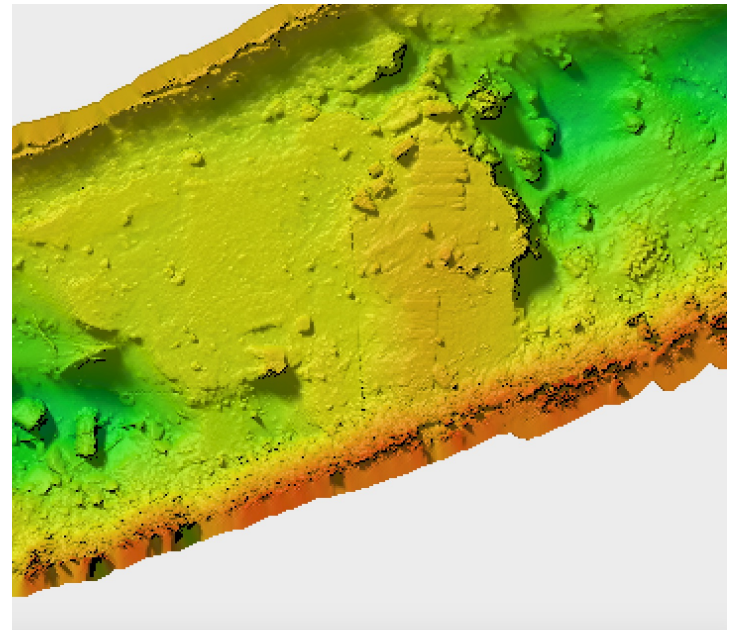
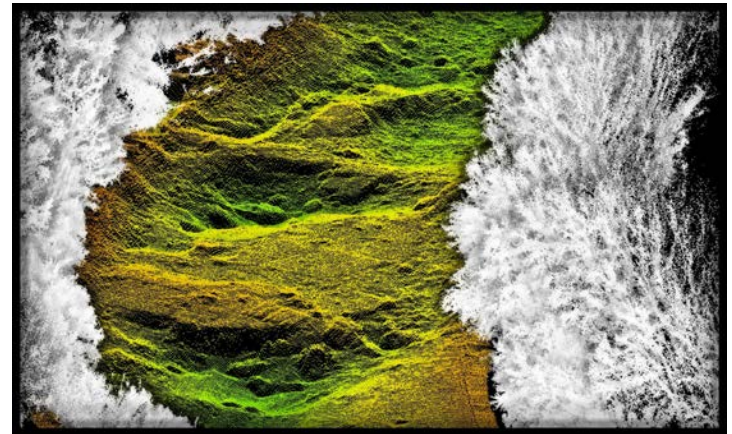
GoogleEarth; Canal data from Salomon et al. 2012, 2014; Key et al. 2020: fig 5.2

- Fossa Traiana, or Fiumicino canal, dates to the Claudian phase of Portus.
- The artificial canal connected the sea, Claudian Basin, and Trajanic Basin to the Tiber.
- 4 of the 5 Portus canals intersected at the Fossa Traiana: Canale Traverso, Canale Romano, Ostia-Portus Canal, and the Fossa itself.

Area 3: Fossa Traiana

Capo Due Rami Platform

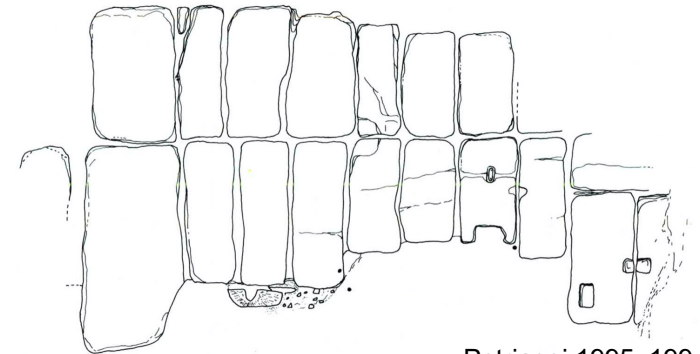
- At the eastern end of the canal, near Capo Due Rami, the survey located an *Opus caementicium* platform finished with travertine blocks
- Roberto Petriaggi and PAO identified the structure during the 1990s and mapped the travertine blocks, proposing that it could be a building foundation (Petriaggi 1995).
- The geophysics survey found that the *opus caementicium* platform is significantly larger than the 1990s survey data, measuring 27.21m long by 48.49m wide, though it extends further under the banks.
 - The intact travertine section measures 23.68m long and 8.14m wide, while the blocks measure 4.23m long and 1.07m wide.
 - The construction of the travertine block matches with the northern mole of the Claudian basin.
- The structure is oriented 4° north along what appears to be the ancient bank of the Tiber.
- Portus had a monumental seaward face, did the Tiber side also have major structures?



Area 3: Fossa Traiana

Capo Due Rami Platform

- The ROV survey noted other terrestrial deposits, such as amphorae, suggesting a subsided terrestrial deposit at a depth of approximately 2m.
- The structure could be a revetment and quay which, based on its angle and orientation, serviced the original bank of the Tiber. Alternatively, it could be a platform for a signal station or fort situated at the junction of the canal and river.
- The submerged platform at Capo Due Rami and the other maritime data providing significant information about the original course of the canal



Petriaggi 1995: 199

