



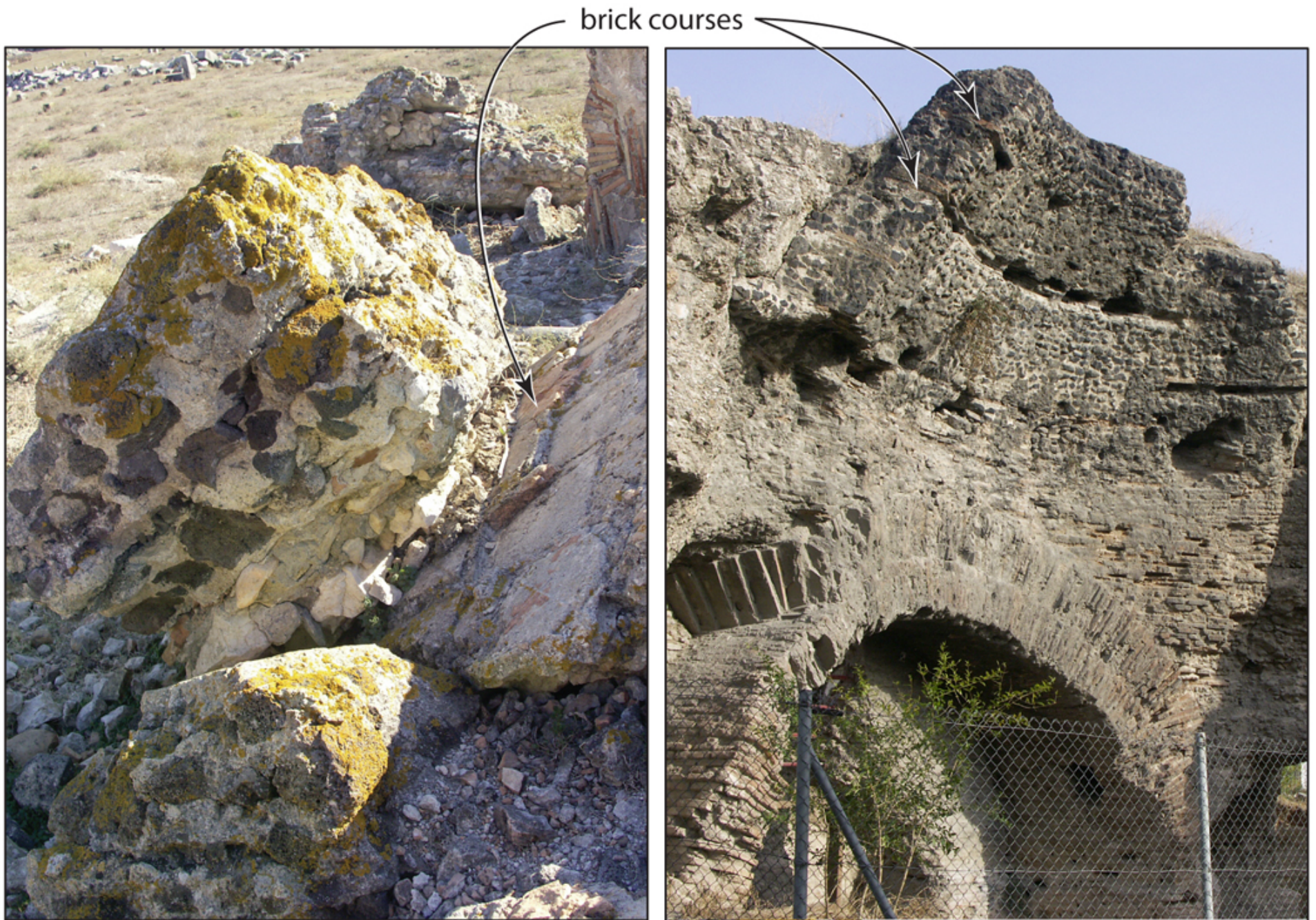
Web Figure 1. Theater at Miletus, Turkey. Arrow indicates block with Didyma oracle inscription.





Web Figure 2. Photos of volcanic ash. Left: Pozzolane Rosse deposits from the Colli Albani at Rome. Right: Monte Procida deposits on the Bay of Naples. .





Web Figure 3. Vaults in Smooth Cilicia with volcanic scoria and brick courses. Left: North Baths at Anazarbus. Right: Baths at Tarsus.





Web Figure 4 (=Figure 10A). Antonine Baths at Carthage (146-162 CE). Chunk of fallen vaulting with *caementa* of dark volcanic scoria imported from Sardinia. Upper right: Detail of scoria.





Web Figure 5 (=Figure 10B). East Baths at Leptiminus, Tunisia (late second century CE). Chunk of fallen vaulting with admixture of light colored pumice imported from Pantelleria.





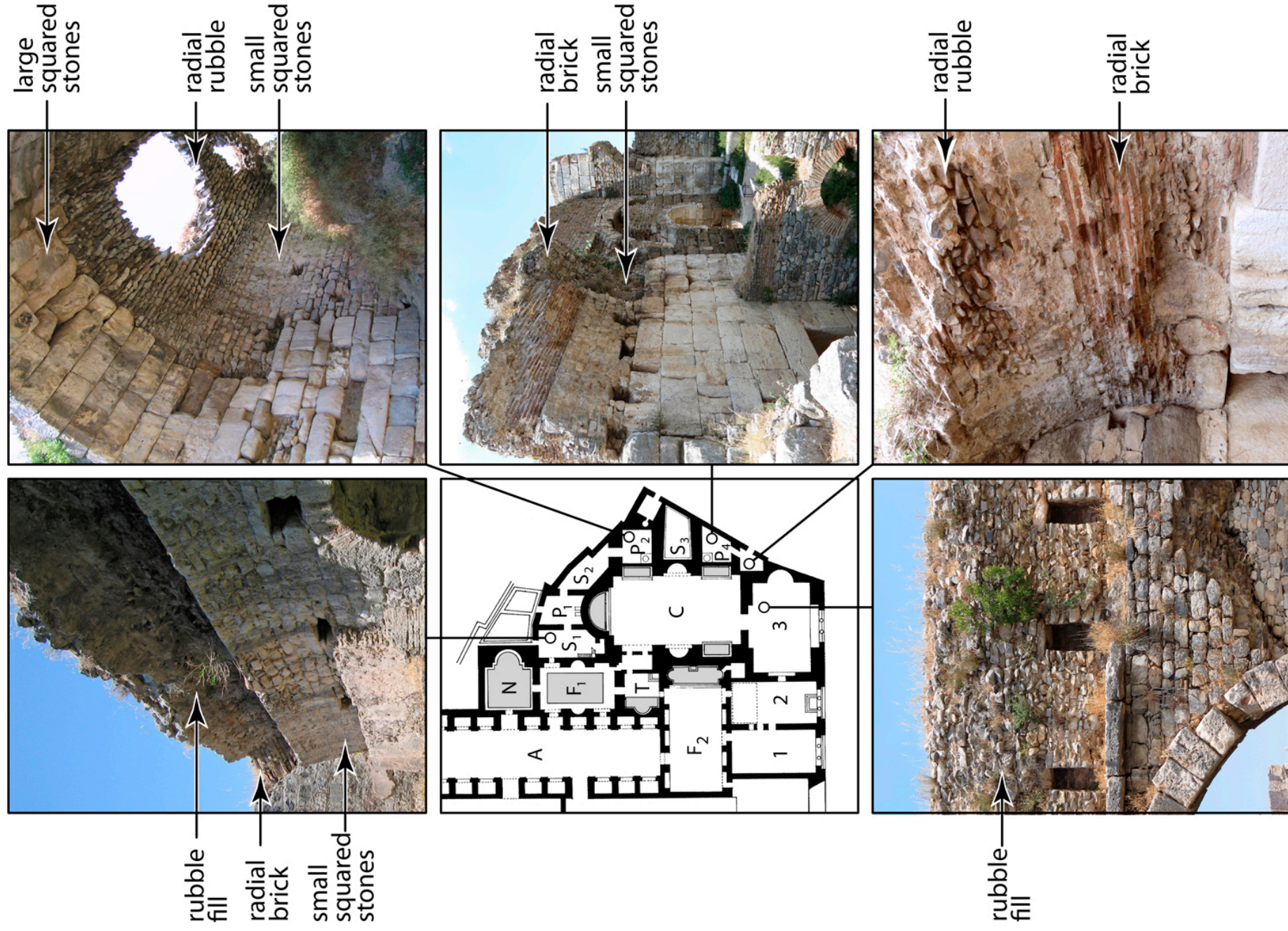
Web Figure 6 (=Figure 13). Examples of radially laid *caementa* combined with courses of radially laid brick. A: Substructures of the Palace of Diocletian at Split, Croatia (c. 305 CE). B: *Praefurnium* for *caldarium* of the Imperial Thermae at Trier, Germany (early fourth century CE). Note vertical tubes in vault for ventilation. The iron tie bars are modern.





Web Figure 7 (=Figure 20). Hadrianic *Horrea* at Patara. Turkey (129 CE). Inset shows a few radial bricks that remain in the grooves carved into the front wall.





Web Figure 8 (=Figure 22). Baths of Faustina at Miletus, Turkey (mid-second century CE). Photos showing variety of methods of vault construction using both brick and stone. In *caldarium* 3 (lower left) the large centering holes are 125 (h) x 45 (w) x 60 (d) cm (Gerkan and Krischen 1928: 85).





Web Figure 9. East Baths at Ephesus, Turkey (compare Figure 23A). Remains of the *caldarium* vault. Right side shows preserved remains of intrados of the barrel vault with the beam holes (large downward arrows), only one of which is not infilled with brick). The small upwards arrows indicate the locations of the vertical exhaust flues. Left side shows the second ring of brick where the intrados layer has fallen away.





Web Figure 10. Uç Goz Baths at Tralles, Turkey (compare Figure 23B). Lower right: Detail showing the damaged beam holes. Note the vertical exhaust tube between the holes and the projecting ledge running along the intrados of the arch (bottom left), which supported the tiles for the wall heating.





Web Figure 11. Baths of Vespasian at Patara, Turkey (mid-second century CE (?)) (compare Figure 34C). Arrow indicates remains of vertical bricks set above the radial bricks at the haunch.