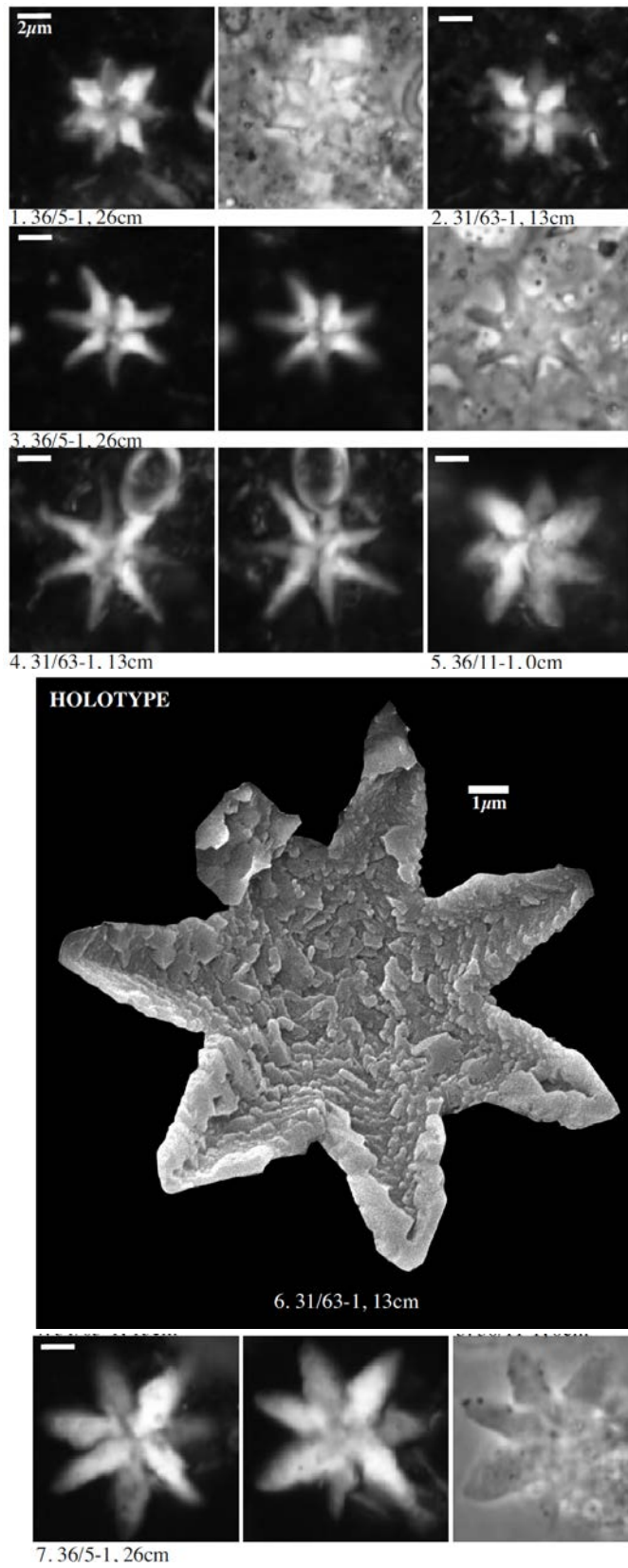
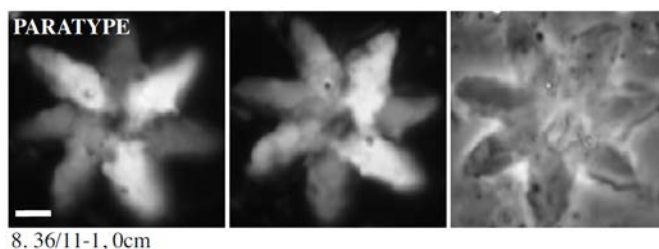


54. *Kokia kayae* Lees & Bown (2016)





Pl. 5, figs 1–8

Derivation of name: After Kaya MacLeod, daughter of the TDP Phase II team co-chief and geochemist.

Diagnosis: SEM – large to very large species of *Kokia* with seven radial, tapering, pointed rays that are free along at least half their length. This nannolith is flat to very slightly concavo-convex, and appears to be composed of numerous, tangentially-arranged laths that thicken and/or become more vertically orientated around the periphery of the nannofossil. The sutures in our SEM specimen are not clearly defined. In the LM, three to four elements go into extinction together on rotation of the nannolith and the sutures between these are radial. There appears to be a depression at the centre of the lith.

Differentiation: *Kokia* has only previously been reported from the Lower Cretaceous (e.g. Kok, 1985; Perch-Nielsen, 1988; van Niel, 1994; Bown *et al.*, 1998) and both species, *borealis* and *curvata*, were defined as only having eight rays each. *Kokia curvata* has very little free-ray length, and so is quite distinct from *K. kayae*, whereas *K. borealis* is defined as having one-quarter to one-half free-ray length, but this might be affected by preservation. The new species differs from *K. borealis* in having seven rays, with greater free-ray length, a distinct extinction pattern and an Upper Cretaceous occurrence. This taxon differs from *Quadrum* (*Eprolithus*?) *giganteum* Varol, 1992, which occurs around this level, but which has nine elements/rays and possibly two cycles. *Biantholithus* differs from *Kokia* in having clearly separate radial elements (seen in SEM), not much free-ray length and two shields, when well preserved.

Holotype: Pl. 5, fig. 6. **Dimensions:** D = 14.0 μ m.

Paratype: Pl. 5, fig. 8.

Type locality: TDP Site 36, W of main road, SW of Lindi, coastal Tanzania.

Type level: TDP 31/63-1, 13cm, UC6b, Lower Turonian.

Occurrence: TDP Sites 22, 26, 31, 34, 36; Lower Turonian; UC6b.

Lees, J.A. & Bown, P.R., 2016. New and intriguing calcareous nannofossils from the Turonian (Upper Cretaceous) of Tanzania. *Journal of Nannoplankton Research*, **36**(1): 83–95.