This study presents the species distribution and morphology of coccolithophores in the area of Kolumbo. Kolumbo is situated in the middle part of the Hellenic Volcanic Arc and is the largest submarine volcano in a series of at least 19 volcanic cones (Kolumbo volcanic chain) that trend NE away from Santorini within the extensional, fault-bounded Anhydros Basin (Nomikou et al., 2012, 2013). Sensitivity of the calcification processes to ocean acidification makes coccolithophores one of the first organisms to be affected by increasing CO$_2$ levels in the ocean. Submarine volcanoes, such as Kolumbo, are well known to emit significant amounts of CO$_2$, thus locally contributing to the production of this greenhouse gas (Carey et al., 2013). Malformed coccoliths have been documented in several locations in the Aegean Sea (Dimiza et al., 2012), and the reason for their common appearance in the Aegean needs further investigation.

References

