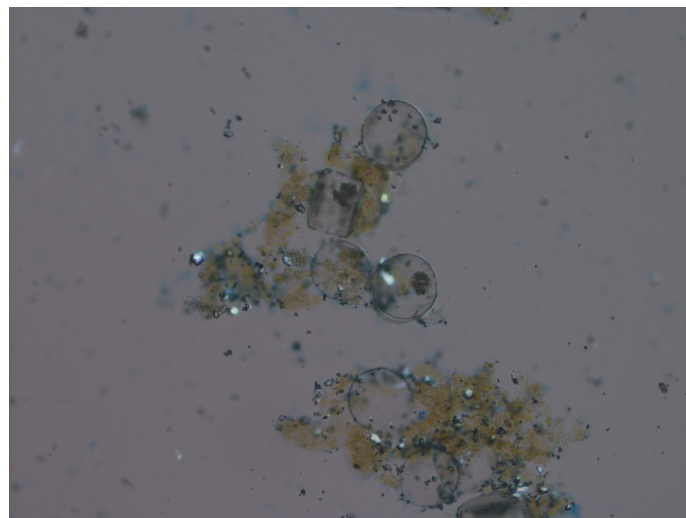
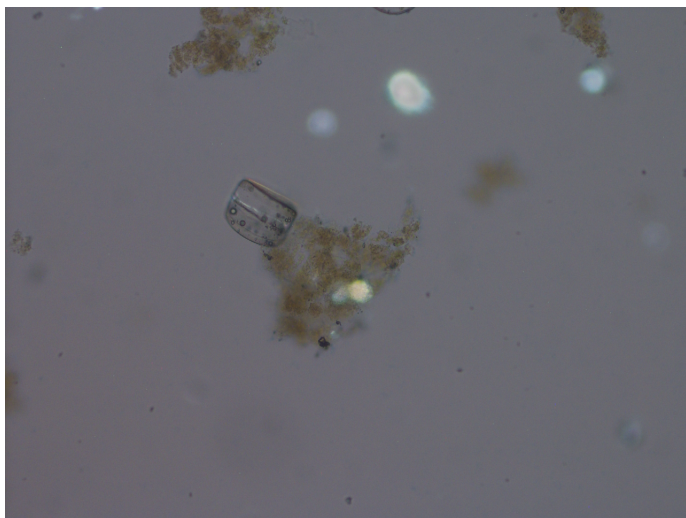
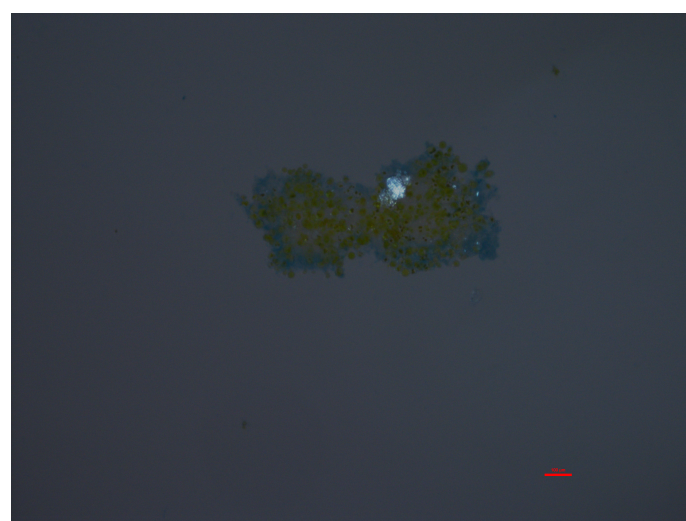
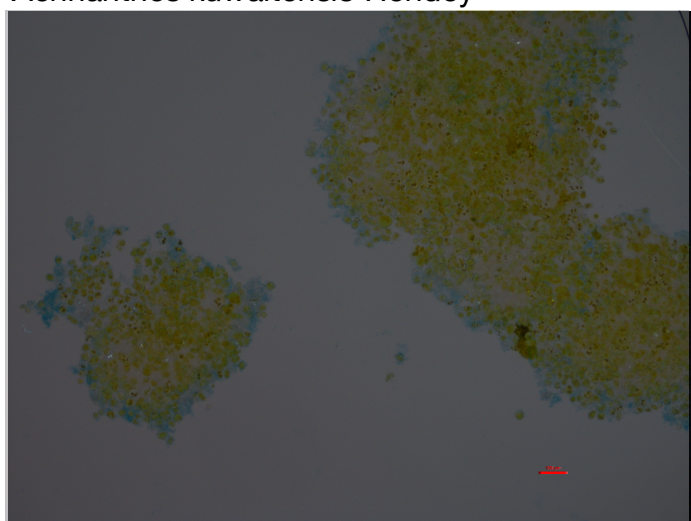


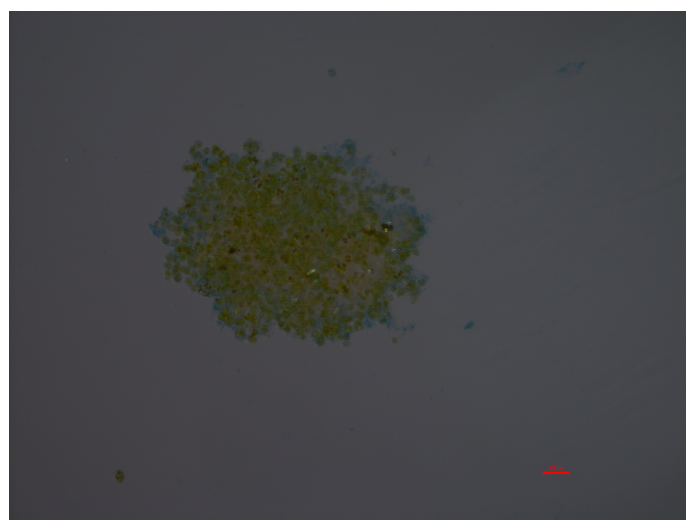
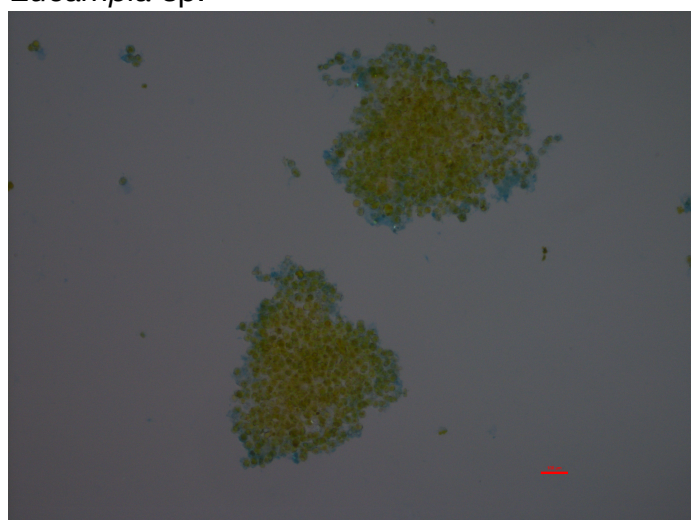
*Coscinodiscus wailesii*



*Achnanthes kuwaitensis* Hendey



*Eucampia* sp.



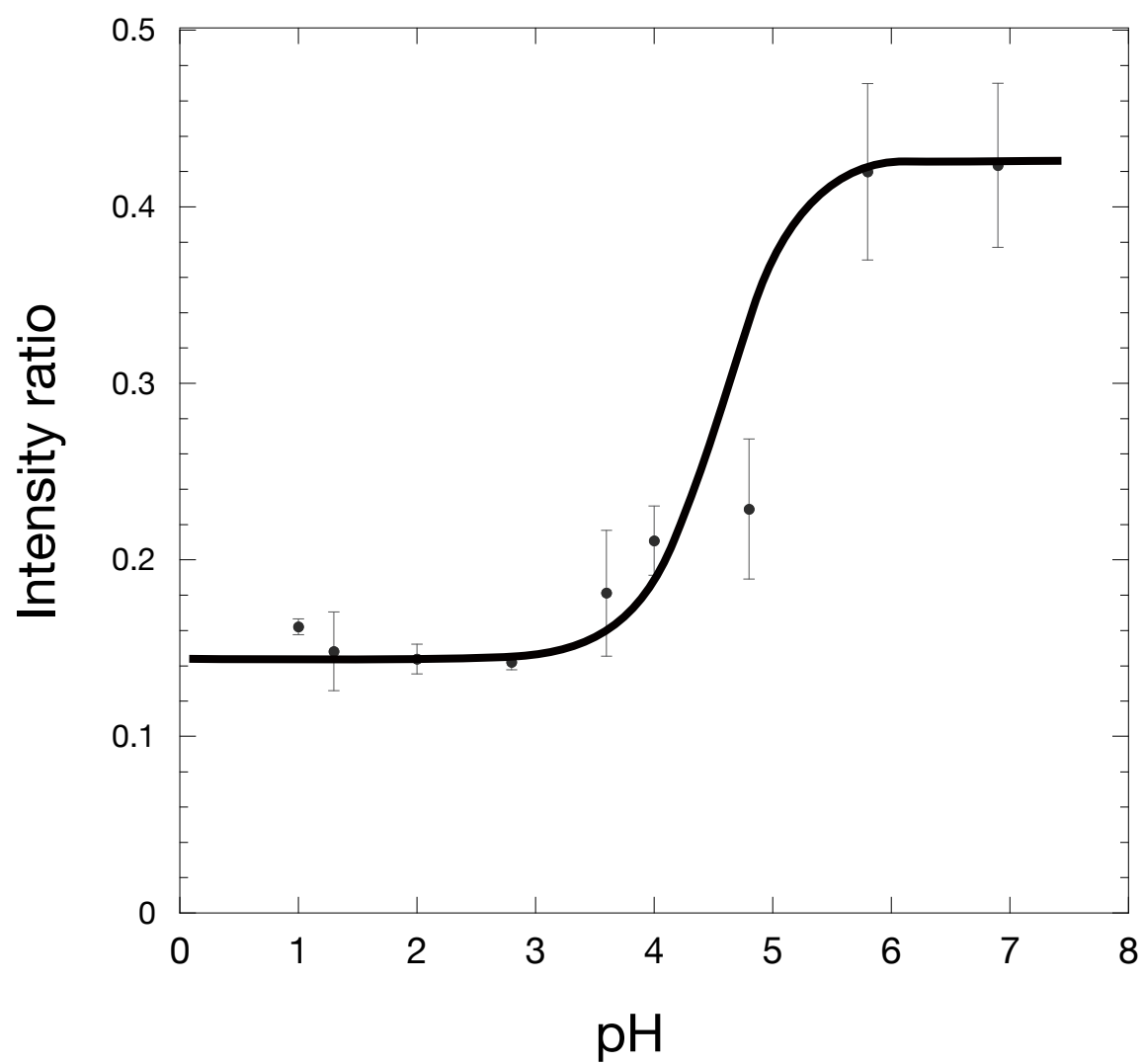


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Figure S1. Photographs of mineral particles with TEP (a, b). Composite of alcian blue stained image showing the distribution of TEP and cross Nicole images showing the distribution of feldspar particles (albite, left; bytownite right).

Figure S2. Calibration curve for pH determination. The ratio of fluorescence intensities excited by 500 nm and 460 nm is plotted against pH of prepared pH standards. Note that the standard solutions were soaked on nylon filters, which is not the case with diatom colonies in seawater.