Scientific ocean drilling retrieves marine sediment records that preserve key information on changes in ocean health through geologic time. Knowledge of how the ocean biosphere responded to major environmental perturbations in the past—for example as a result of volcanic perturbations to the carbon cycle during the Cretaceous (left)—will provide insights on the future of ocean health through the Anthropocene (right). Illustration by Rosalind Coggon and Geo Prose.