

Physiological and ecological drivers of early spring blooms of a coastal phytoplankter

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Drivers of phytoplankton blooms

Despite decades of study, there is little evidence to link increases in phytoplankton growth in response to springtime warming with the dynamics of phytoplankton blooms. This lack of understanding makes it difficult to make predictions about global biogeochemical cycling in response to climate change. Hunter-Cevera *et al.* analyzed over a decade of data collected hourly from the New England shelf between 2003 and 2016 (see the Perspective by Worden and Wilken). Blooms now occur 20 days earlier than at the start of observations, because earlier springtime warming stimulates cell division earlier each year. Nevertheless, despite the shift in timing, predatory organisms in the food chain are still ready to consume the superabundance, which brings the blooms to an abrupt end each year.

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