

List of changes made:

Reviewer #1

1. Abstract, Line 10, the generation time of 1 day-1 concern: no changes made to text as justified in the public response.
2. Rephrased the sentence in Abstract, Line 22 to read as follows: “This study challenges the current assumption that sexual reproduction predominates during bloom events.”
3. Discussion, line 9: Changed “occurring” to “prevailing”

Reviewer #2

1. We did not include the Nagai et al publication as this paper is poorly presented (as outlined in the open discussion).
2. No further changes to the isolation method were made. Our public response dealt with this sampling issue bias concern.
3. Deleted the “P. von Dassow, personal communication” sentence in the Discussion section. By doing this we’ve reduced the emphasis on the reliance of this observation.
4. Our methods section details the magnification range used to determine morphology.
5. *Pg.4364 L19-21*: inserted “blastn”
6. *Pg4365 L27*:added text “A positive and negative control was electrophoresed with each set of samples run on the sequencer. After optimization, a subset of known genotypes was transferred to SourceBioScience Nottingham for fragment analysis on a 3730xL DNA analyser run on a 50 cm capillary array. For all clonal isolates, 7 µL of each PCR product was sent to SourceBioScience, including positive and negative controls for each sequencer run.”
7. *Pg4375 L18-20*: now reads as follows “CMM I in a homozygous state was also found in other geographic strains, seven were of Chilean and two of Norwegian origins (Table 1).”
8. *Pg4369 L5*: now reads as: “Hinz (2010) estimated the number of mutations per microsatellite locus per generation in *E. huxleyi* to be between 7×10^{-3} to 142 over a 15 year culture period.”
9. *Pg4375 L1-4* & *Pg4385 L4-8*: no changes made as misunderstanding was resolved in open response.
10. Tables & Figures formatting concerns can be discussed again with the typesetters.