INTERFACE

Correction

Subject Category:

Life Sciences – Earth Science interface

Correction to 'Dynamics of phytoplankton blooms in turbulent vortex cells'

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The values for the sinking rate (w), given in table 1, were reported incorrectly. The values used in the model simulation were 0.96 m d^{-1}. Furthermore, the caption of table 1 should only refer to reference [1]. The corrected table is given below.

In figure 4, the label of the x-axes was presented incorrectly. They should have stated unit of m d^{-1}. Furthermore, the equation given in the figure caption refers to the dashed lines in figure 4a, as now clarified in the new figure caption. The corrected figure is displayed below.

Table 1. Parameter values used in the simulations. 'Standard values' are the same as the values used by Huisman *et al.* [1], while the 'deep convective values' represent values adjusted to deep convective systems in the North Atlantic. The value of k_T (0.055 m^{-1}) for the deep convective set up gives a euphotic depth, defined as the depth of 1% surface light, of approximately 80 m.

parameter	description	standard values	deep convection values	unit
physical				
I_0	surface light	350	100	μmol photons m^{-2} s^{-1}
k_T	background turbidity of water	0.2	0.055	m^{-1}
biological				
k_i	light half-saturation constant	30	45	μmol photons m^{-2} s^{-1}
L	specific loss rate	0.24	0.01	d^{-1}
g_{max}	max. specific growth rate	0.96	0.96	d^{-1}
w	sinking velocity	0.96	0.96	m d^{-1}

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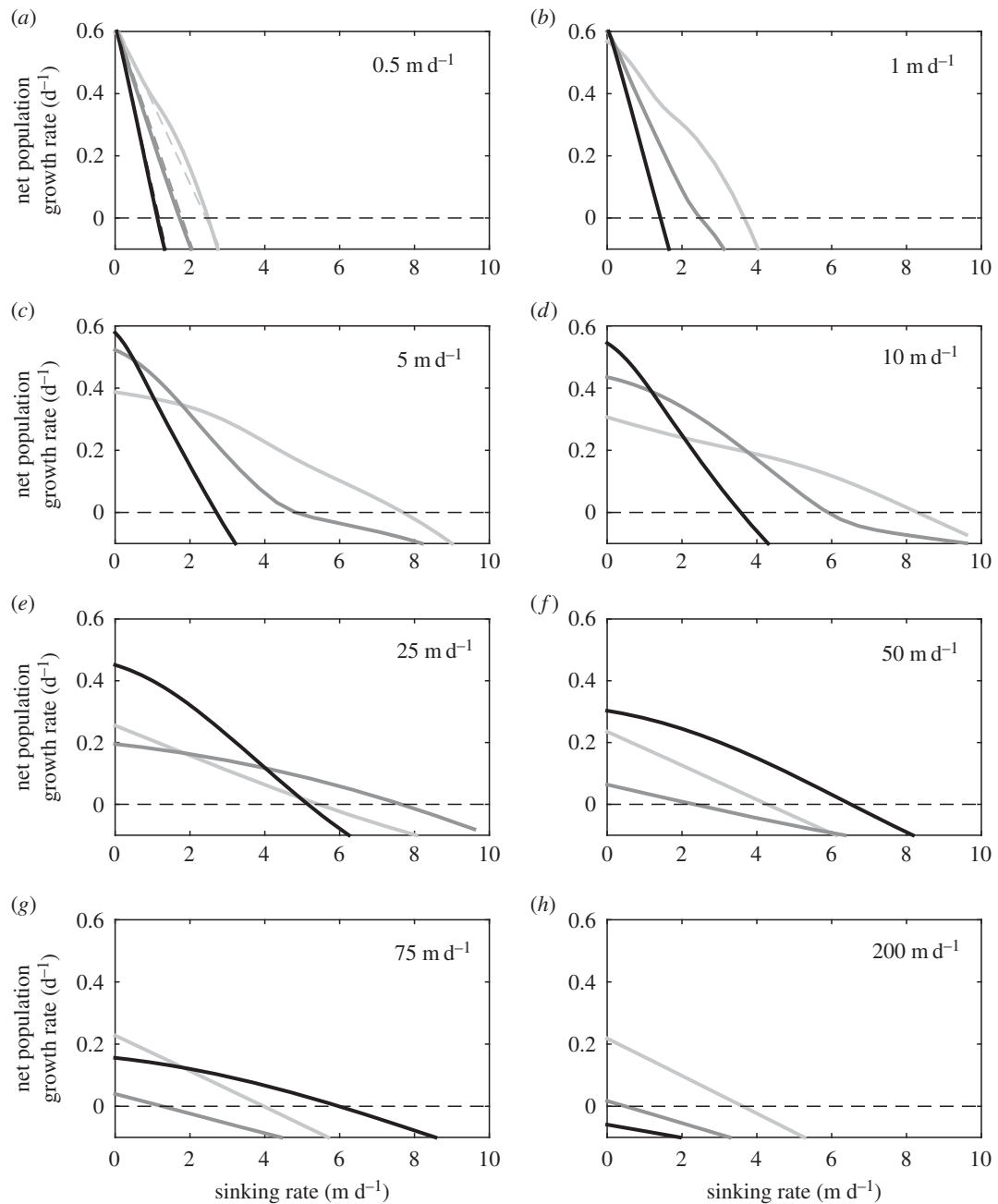
Figure 4. Sensitivity of the growth rate as a function of sinking velocity for different mean flow velocities $(a-h)$ at a mixed layer depth of 25 m (light grey line); 50 m (dark grey line) and 100 m (black line). The dashed lines in figure 4a represent the net population growth rate estimated from $r = w(-0.0037h_z - 0.167) + 0.63$. All other parameters as in table 1.

Reference

1.   Huisman J, Arrayás M, Ebert U, Sommeijer B. 2002 How do sinking phytoplankton species manage to persist? *Am. Nat.* **159**, 245–254. (doi:10.1086/338511)