

Model-specific parameters		
Parameter	Description	Value
Size ( $V$ )	Length of the environment	1 - 1000
Flow rate ( $Q$ )	units of $V$ moved per time step	0.001 - 1
Resource diversity ( $R$ )	number of inflowing resource types	1 - 3
Maximum resource particle size	Greatest size for an inflowing resource particle	1 - 1000
Immigration rate	per capita probability of immigration per time step	0.0001 - 1
Inflowing resource concentration	probability of a resource particle flowing in per time step	0.0001 - 1
Species-specific traits		
Trait	Description	Value
Intrinsic growth rate	proportional increase per time step	0.001 - 1
Active dispersal rate	units of space traveled against direction of flow per time step	0.001 - 1
Resuscitation rate	probability of resuscitating per time step	0.001 - 1
Basal metabolic rate (BMR)	proportion of endogenous resources lost to maintenance respiration per unit time	0.001 - 1
Reduction of BMR	proportional decrease of BMR when entering dormancy	0.001 - 1
Resource growth efficiencies	proportion of consumed resources assimilated in biomass	0.0 - 1/ $R$
Individual-specific variables		
Variable	Description	Value
Resource quota ( $q_i$ )	amount of endogenous resources	0 - unconstrained
Body size	Individual biomass (does not include $q_i$ )	0 - unconstrained
$x$	position along $V$	0 - $V$
Species	species of an individual	unconstrained
State	metabolic state	active or dormant