

Trade-off	Parameter Combinations	Significance
None	$\gamma_{S,G} = \gamma_{S,P} = 20$ and $\varsigma_{S,G} = \varsigma_{S,P} = 0.001$	Generalist and specialist phage are parametrically identical
Cost of generalism (burst size)	$\gamma_{S,G} = \gamma_{E,G} = 20$ and $\gamma_{S,G} < \gamma_{S,P}$	Generalist and specialist phage differ in their abilities to kill prey due to differences in burst size
Cost of generalism (attachment rate)	$\varsigma_{S,G} = \varsigma_{E,G} = 0.001$ and $\varsigma_{S,G} < \varsigma_{S,P}$	Generalist and specialist phage differ in their abilities to kill prey due to differences in attachment rate
Interaction outcome (growth rate)	$\mu_S = 0.5$ and $\mu_E \neq \mu_S$	Prey species coexistence in the absence of phage is biased or impossible due to differences in growth rate
Interaction outcome (interaction coefficient, competition)	$\beta_{S,E} = 1$ and $\beta_{E,S} \neq \beta_{S,E}$	Prey species coexistence when competing in the absence of phage is biased or impossible due to differences in interaction coefficients
Interaction outcome (interaction coefficient, mutualism)	$\alpha_{S,E} = 1$ and $\alpha_{E,S} \neq \alpha_{S,E}$	Prey species coexistence when mutualistic in the absence of phage is biased or impossible due to differences in interaction coefficients
Cost of generalism and interaction outcome (growth rate)	$(\gamma_{S,G} = 20 \text{ and } \gamma_{S,G} < \gamma_{S,P}$ and $\mu_S = 0.5 \text{ and } \mu_E \neq \mu_S)$ or $(\varsigma_{S,G} = 0.001 \text{ and } \varsigma_{S,G} < \varsigma_{S,P}$ and $\mu_S = 0.5 \text{ and } \mu_E \neq \mu_S)$	Generalist and specialist phage differ in their ability to kill prey and prey species coexistence in the absence of phage is biased or impossible due to differences in growth rate
Cost of generalism and interaction outcome (interaction coefficient, competition)	$(\gamma_{S,G} = 20 \text{ and } \gamma_{S,G} < \gamma_{S,P}$ and $\beta_{S,E} = 1 \text{ and } \beta_{E,S} \neq \beta_{S,E})$ or $(\varsigma_{S,G} = 0.001 \text{ and } \varsigma_{S,G} < \varsigma_{S,P}$ and	Generalist and specialist phage differ in their ability to kill prey and prey species coexistence when competing in the absence of phage is biased or impossible due to differences in interaction coefficients

	$\beta_{S,E} = 1$ and $\beta_{E,S} \neq \beta_{S,E}$)	
Cost of generalism and interaction outcome (interaction coefficient, mutualism)	$(\gamma_{S,G} = 20$ and $\gamma_{S,G} < \gamma_{S,P}$ and $\alpha_{S,E} = 1$ and $\alpha_{E,S} \neq \alpha_{S,E})$ or $(\varsigma_{S,G} = 0.001$ and $\varsigma_{S,G} < \varsigma_{S,P}$ and $\alpha_{S,E} = 1$ and $\alpha_{E,S} \neq \alpha_{S,E})$	Generalist and specialist phage differ in their ability to kill prey and prey species coexistence when mutualistic in the absence of phage is biased or impossible due to differences in interaction coefficients