90 mm

experimental dish

plexiglass disk on the bottom

25 mm

20 mm

shelter (hole drilled in the disk)

7 mm

17 mm

3 mm

Figure S1. Experimental setup

Table S1. Numbers of particular amphipod pairs obtained in the study.

Amphipod species	Infection status	D. haemobaphes		D. villosus	
		N-inf	Inf	N-inf	Inf
Dikerogammarus haemobaphes	Non-infected (N-inf)	44			
	Infected (Inf)	18	18		
Dikerogammarus villosus	Non-infected (N-inf)	175	27	73	
	Infected (Inf)	16	36	80	66

Table S2. Analyses carried out within the study. Responding individuals (bolded) are used for the analysis, accompanying individuals are the pair members whose impact on the responding individuals is being tested.

Analysis	Comparison	Data subset (**responding**/accompanying individual)[1, 2]	Variables in the model[3]
1. Intraspecific relationships			
A	Effect of own infection on responses to non-infected conspecifics	• **N-inf Dh**/N-inf Dh • **Inf Dh**/N-inf Dh • **N-inf Dv**/N-inf Dv • **Inf Dv**/N-inf Dv	• Species1 • Infection1 • Mass ratio
B	Effect of own infection on responses to infected conspecifics	• **Inf Dh**/Inf Dh • **N-inf Dh**/Inf Dh • **Inf Dv**/Inf Dv • **N-inf Dv**/Inf Dv	
C	Effect of the accompanying conspecific infection on non-infected individuals	• **N-inf Dh**/N-inf Dh • **N-inf Dh**/Inf Dh • **N-inf Dv**/N-inf Dv • **N-inf Dv**/Inf Dv	• Species1 • Infection2 • Mass ratio
D	Effect of the accompanying conspecific infection on infected individuals	• **Inf Dh**/Inf Dh • **Inf Dh**/N-inf Dh • **Inf Dv**/Inf Dv • **Inf Dv**/N-inf Dv	
2. Comparisons between intra- and interspecific relationships			
E	Effect of the accompanying species identity on Dh	• **N-inf Dh**/N-inf Dh • **N-inf Dh**/N-inf Dv • **Inf Dh**/N-inf Dh • **Inf Dh**/N-inf Dv	• Species2 • Infection1 • Mass ratio
F	Effect of the accompanying species identity on Dv	• **N-inf Dv**/N-inf Dv • **N-inf Dv**/N-inf Dh • **Inf Dv**/N-inf Dv • **Inf Dv**/N-inf Dh	
3. Interspecific relationships			
G	Effect of own infection and the accompanying heterospecific infection	• **N-inf Dh/N-inf Dv** • **N-inf Dh/Inf Dv** • **Inf Dh/N-inf Dv** • **Inf Dh/Inf Dv**	• Species1[4] • Infection1 • Infection2 • Mass
4. Intra- and interspecific relationships			
H	Time spent together in shelter	All pair combinations (n-inf, inf, conspecific, heterosp.)	• Pair composition • Mass ratio

[1] Responding individuals from uniform pairs (conspecifics of the same infections status) selected at random (analyses A-F)

[2] Dh – *Dikerogammarus haemobaphes*, Dv – *Dikerogammarus villosus*; Inf – infected, N-inf – non-infected

[3] Species1, 2 – species identity of the responding and accompanying individual, respectively; Infection1, 2 – infection status of the responding and accompanying individual, respectively; Mass ratio: responding/accompanying individual (analyses A-F) or larger/ smaller individual (analysis H); mass – individual mass (analysis G)

[4] In analysis H, both members of the pair were used as responding individuals, thus Species1 was modelled as a within-subject factor