

Table S1. Comparison of molecular and histological data showing correspondence between PCR detection of novel paramoebid species (*J. feisti*), *Neoparamoeba pemaquidensis* and *N. aestuarina*) with histology detection of amoeba-like cells and pathology within the crab tissues. PCR results are shown in terms of gel electrophoresis band intensity, judged by eye, from very weak (+) to very strong (+++++). Very weak (+) bands were not counted as positive for the results summarized in Table 3 and the relevant section of the Results. Samples which were analysed by *in situ* hybridization (ISH) are indicated.

	<i>J. feisti</i>			<i>N. pemaquidensis</i> and <i>N. aestuarina</i>			Samples used for ISH	Histology	
	Primers: 210FA-1319R/210FA-478R			Primers:56F-1165R/150F-1165R				Amoeba cells observed	Host Response
	Gill	Hepatopancreas	Heart	Gill	Hepatopancreas	Heart			
Oct-19									
1	+++++	+++++	+++++	+++++	-	-	Labelling in gill, hepatopancreas and heart	Hepatopancreas, connective tissues, gill	Host response
2	+++++	-	+++++	-	-	-		Low level	Host response
3	+++++	+++++	+++++	+++	+++	-		Connectives, heart, gill	Host response
4	+++++	+++++	+++++	-	-	-		Low level	Host Response
5	+++++	+++++	+++++	-	++++	-		Connectives, hepatopancreas, heart, gill. Moderate infection	Host Response
6	+++++	+++++	+++++	+++++	-	-		-	Host Response
7	+++++	+++++	+++++	-	-	-		Low level	Host Response
8	+++++	-	+++++	+++++	-	-		Low level	Host Response, granuloma in gill
9	+++++	-	-	-	-	-	No labelling observed in any tissues	-	-
10	+++++	-	+++++	+	-	-		Hepatopancreas, heart	Host response
11	-	-	+++++	-	-	-		Haemal spaces	Host response
12	+++++	-	-	-	-	-		Connectives	Host response
13	+++++	+++++	-	++++	-	-		Connectives	Host response
14	+++++	-	-	+	+++++	-		-	Host response
15	+++++	+++++	+++++	+	+++++	-		-	Host response
16	-	-	+++++	-	-	-		-	Host response
17	+++++	-	+++++	+++++	-	-		Data not available	Data not available
18	+++++	-	+++++	-	+	-		-	-
19	+++++	+++++	+++++	-	-	-	Labelling in gill, hepatopancreas and heart	Heavy infection all tissues	Host response

20	-	-	+++++	+	-	-		-	-
21	-	-	-	++++	-	-		-	-
22	+++++	-	+++++	-	-	-		Connectives	Host response
23	-	-	-	+	-	-		-	-
24	+++++	-	+++++	+	-	-		Low level	Host response
25	+++++	+++++	+++++	+	-	-		-	Host response
26	+++++	+++++	+++++	-	-	-		Low level	Host response
27	+++++	-	+++++	+	-	-		Connectives	Host response
28	+++++	-	+++++	++++	-	+++++		Connectives	Host response
29	+++++	-	+++++	-	-	+++		-	Host response, granulomas
30	-	+++++	+++++	-	-	-	Labelling in gill, hepatopancreas and heart	Heavy infection connectives, Hepatopancreas, gill	Host response
Nov-19	-	-	-	-	-	-			
1	-	-	-	-	+	-		-	-
2	+++	+++++	-	+	+	+		Hepatopancreas, heart, gonad, gill	Host Response
3	++	+	++	++	-	+		Low level gill	Host Response
4	++	-	-	++	-	+		Low level gill	Host Response
5	-	-	-	++	+	+		-	-
6	-	-	-	++	+	+		-	-
7	++	+++	+++	++	+	+		Hepatopancreas, heart, gill	Host Response
8	++	-	-	++	-	+		-	Host Response
9	-	-	-	-	+	-		-	-
10	++++	+++	+++	+	-	+		Hepatopancreas, heart, gill	Host Response
11	-	-	-	-	-	-		-	-
12	-	-	-	+	-	+		-	-
13	-	-	-	-	-	+		-	-
14	-	-	-	+	+	+		-	-
15	-	-	-	+	+	-		-	-
16	-	-	-	+	-	-		-	-
17	-	-	-	+	-	-		-	-
18	-	-	-	++	+	++++		-	-
19	-	-	-	+	+	-		-	-
20	-	-	-	+	-	-		-	-
21	-	-	-	+++++	++	+		-	-
22	-	-	-	+++++	-	-		-	-

Dec-20									
1	+++	+++++		-	-			-	Host Response, Granulomas in connective tissues
2	-	-		-	-			-	-
3	-	-		+++++	-			-	Host Response
4	-	-		-	-			-	Host Response
5	+++++	+++++		++++	-			-	Host Response, Granulomas
6	+++++	-		-	-			-	Host Response
7	-	-		-	-			-	-
8	+++++	-		-	-			-	Host Response, Granulomas
9	+++	-		++++	-			-	-
10	+++++	-		+++++	-			Connectives, hepatopancreas, heart, gill	Host Response
11	+++++	-		-	-			-	Host Response
12	+++++	-		-	-			-	Host Response
13	+++++	-		-	-			-	Host Response, Granulomas
14	-	-		-	-			-	Host Response, Granulomas
15	+++++	+++++		-	-			-	Host Response
16	-	-		+++	-			-	Host Response
17	+++++	+++++		+++	++			-	Host Response, Granulomas
18	-	-		-	-			-	Granulomas in gills
19	-	-		-	-			-	-
20	-	-		++	-			-	-
21	+++++	+++++		+++++	+++			-	Host Response, Granulomas
22	-	-		+++++	-			-	Granulomas in gills
23	-	-		+++++	-			-	Host Response
24	-	-		+++++	+			-	-
25	+++++	-		+++++	-			-	-
26	-	-		+++++	+++			-	-
27	+++++	+++++		+++++	+++			-	Granulomas
28	+++++	+++++		+++++	-			-	-

29	-	-		-	-		-	-
30	+++++	+++++		+++++	-		-	Granulomas
31	+++++	-		+++++	-		-	Host Response
32	-	-		+++	-		-	-
33	+++++	+++++		+++++	-		-	Host Response
34	-	-		-	-		-	Host Response, Granulomas
35	-	-		+++++	++++	No labelling observed in any tissues	-	Host Response
36	-	-		+++++	++++	No labelling observed in any tissues	-	Host Response, Granulomas
37	-	-		+++++	-		-	Granulomas in heart
38	-	+++++		++	-		-	Host Response
39	-	-		+++++	-		-	Granulomas in heart
40	-	-		-	-		-	Host Response
41	-	-		+++++	-		-	-
42	-	-		-	-		-	Granulomas
43	-	-		-	-		-	Host Response, Granulomas
44	-	-		++	-		-	-
45	-	-		-	-		-	-
46	+++	-		-	-		-	-

Fig. S1. Bayesian 18S rRNA gene phylogenetic tree of paramoebids as shown in Figure 4 of the main text, with all clades uncollapsed



0.2