

The following supplement accompanies the article

The most vagile host as the main determinant of population connectivity in marine macroparasites

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This supplement contains 2 figures and 9 tables. Figure S1 is mismatch distributions. Figure S2 is Extended Bayesian Skyline Plots (EBSP). Tables S1 to S9 are pairwise population comparisons for *Gymnophallus choledochus* and *Bucephalus minimus*. More details can be found in the figure and table captions.

Fig. S1

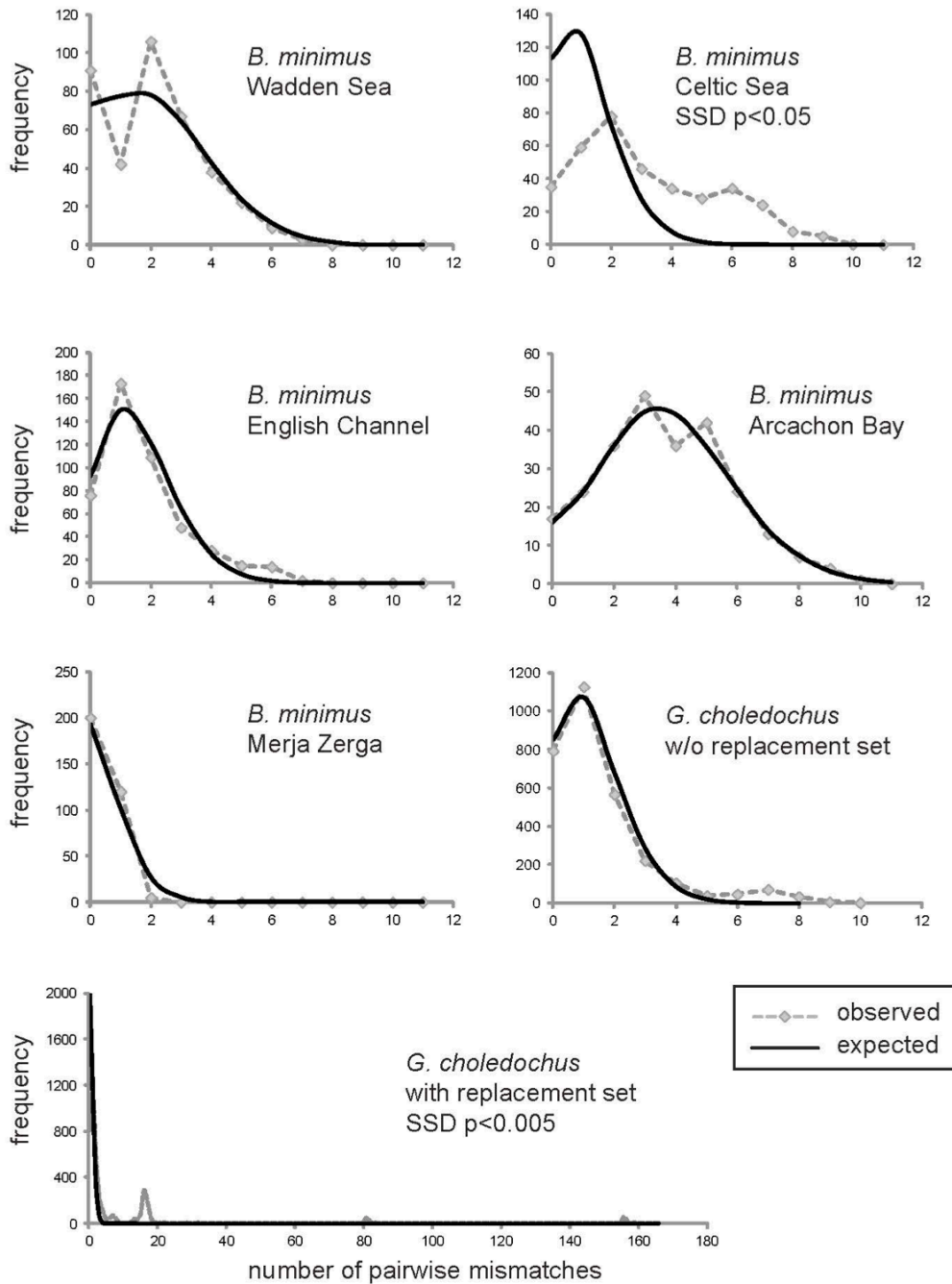


Fig. S1 - Mismatch distributions on the basis of observed data (broken lines) and under a model of population expansion (continuous lines) for *Bucephalus minimus* and *Gymnophallus choledochus*. Mismatch value equals the number of nucleotide differences between haplotypes.

Fig. S2

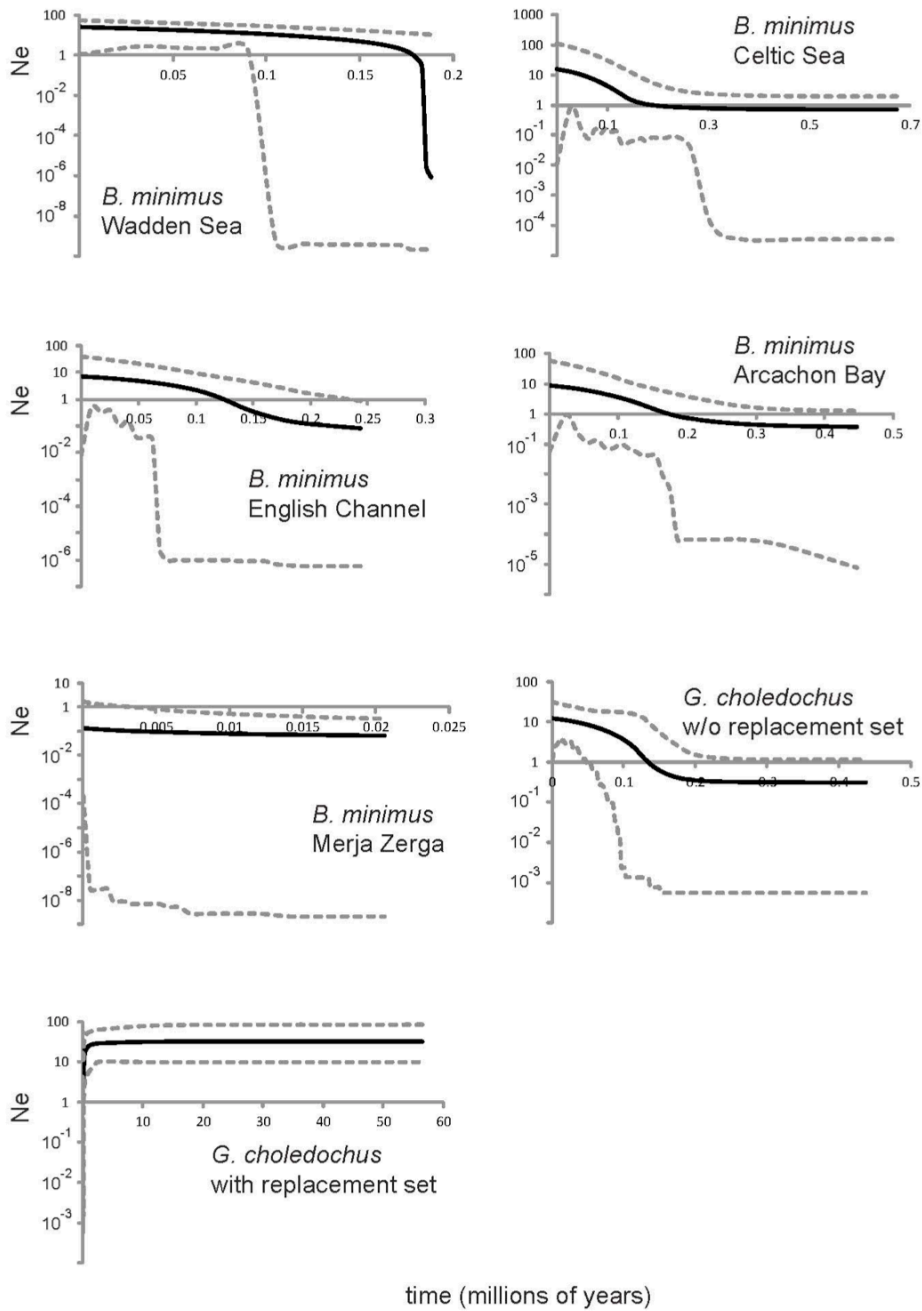


Fig. S2 - Extended Bayesian Skyline Plots for *Bucephalus minimus* and *Gymnophallus choledochus*. For all plots, x-axis indicates time in millions of years ago, y-axis is effective population size N_e . Continuous line equals the median estimate and broken lines are upper and lower limit of the 95% HPD (Highest Posterior Density) estimate.

Table S1 - Pairwise population comparisons (below diagonal) for *Gymnophallus choledochus* with replacement set based on partial cytochrome c oxidase 1 sequences. If values are printed in bold, then they are significantly different from 0 after Bonferroni correction (corrected *P*-level 0.005). *P*-values are above diagonal.

	Norsminde Fjord	Wadden Sea	Celtic Sea	English Channel	Arcachon Bay
Norsminde Fjord	-	0.05990	0.65003	0.09405	0.85289
Wadden Sea	0.04927	-	0.91793	0.01901	0.27572
Celtic Sea	-0.03396	-0.07857	-	0.20958	0.81269
English Channel	0.04072	0.07996	0.03715	-	0.10850
Arcachon Bay	-0.02852	0.01461	-0.06384	0.02420	-

Table S2 - Pairwise population comparisons (below diagonal) for *Gymnophallus choledochus* with replacement set, but without the Celtic Sea sample, based on partial cytochrome c oxidase 1 sequences. If values are printed in bold, then they are significantly different from 0 after Bonferroni correction (corrected *P*-level 0.00833). *P*-values are above diagonal.

	Norsminde Fjord	Wadden Sea	English Channel	Arcachon Bay
Norsminde Fjord	-	0.06009	0.08356	0.85625
Wadden Sea	0.04927	-	0.01950	0.27522
English Channel	0.04072	0.07996	-	0.10732
Arcachon Bay	-0.02852	0.01461	0.02420	-

Table S3 - Pairwise population comparisons (below diagonal) for *Gymnophallus choledochus* with replacement set, but without the Celtic Sea and Norsminde Fjord samples, based on partial cytochrome c oxidase 1 sequences. If values are printed in bold, then they are significantly different from 0 after Bonferroni correction (corrected *P*-level 0.0167). *P*-values are above diagonal.

	Wadden Sea	English Channel	Arcachon Bay
Wadden Sea	-	0.02228	0.27770
English Channel	0.07996	-	0.10989
Arcachon Bay	0.01461	0.02420	-

Table S4 - Pairwise population comparisons (below diagonal) for *Gymnophallus choledochus* without replacement set based on partial cytochrome c oxidase 1 sequences. If values are printed in bold, then they are significantly different from 0 after Bonferroni correction (corrected *P*-level 0.005). *P*-values are above diagonal.

	Norsminde Fjord	Wadden Sea	Celtic Sea	English Channel	Arcachon Bay
Norsminde Fjord	-	0.70597	0.31561	0.69805	0.14850
Wadden Sea	-0.01160	-	0.69369	0.40610	0.91229
Celtic Sea	0.01333	-0.01817	-	0.88407	0.50965
English Channel	-0.01460	0.00270	-0.03579	-	0.51737
Arcachon Bay	0.01583	-0.01354	0.00013	-0.00449	-

Table S5 - Pairwise population comparisons (below diagonal) for *Gymnophallus choledochus* without replacement set, but without the Celtic Sea sample, based on partial cytochrome c oxidase 1 sequences. If values are printed in bold, then they are significantly different from 0 after Bonferroni correction (corrected *P*-level 0.00833). *P*-values are above diagonal.

	Norsminde Fjord	Wadden Sea	English Channel	Arcachon Bay
Norsminde Fjord	-	0.71062	0.69221	0.14791
Wadden Sea	-0.01160	-	0.41382	0.90912
English Channel	-0.01460	0.00270	-	0.53054
Arcachon Bay	0.01583	-0.01354	-0.00449	-

Table S6 - Pairwise population comparisons (below diagonal) for *Gymnophallus choledochus* without replacement set, but without the Celtic Sea and Norsminde Fjord samples, based on partial cytochrome c oxidase 1 sequences. If values are printed in bold, then they are significantly different from 0 after Bonferroni correction (corrected *P*-level 0.0167). *P*-values are above diagonal.

	Wadden Sea	English Channel	Arcachon Bay
Wadden Sea	-	0.40996	0.91377
English Channel	0.00270	-	0.52391
Arcachon Bay	-0.01354	-0.00449	-

Table S7 - Pairwise population comparisons (below diagonal) for *Bucephalus minimus* based on partial cytochrome c oxidase 1 sequences. Values in bold are significantly different from 0 after Bonferroni correction (corrected *P*-level 0.005). *P*-values are above diagonal.

	Wadden Sea	Celtic Sea	English Channel	Arcachon Bay	Merja Zerga
Wadden Sea	-	0.00000	0.50787	0.00059	0.00000
Celtic Sea	0.05946	-	0.00020	0.00307	0.00000
English Channel	-0.00130	0.06758	-	0.03109	0.00000
Arcachon Bay	0.07916	0.05913	0.04671	-	0.00000
Merja Zerga	0.60575	0.43821	0.62259	0.37205	-

Table S8 - Pairwise population comparisons (below diagonal) for *Bucephalus minimus* without Merja Zerga sample based on partial cytochrome c oxidase 1 sequences. Values in bold are significantly different from 0 after Bonferroni correction (corrected *P*-level 0.00833). *P*-values are above diagonal.

	Wadden Sea	Celtic Sea	English Channel	Arcachon Bay
Wadden Sea	-	0.00059	0.49025	0.00030
Celtic Sea	0.05946	-	0.00010	0.00347
English Channel	-0.00130	0.06758	-	0.02980
Arcachon Bay	0.07916	0.05913	0.04671	-

Table S9 - Pairwise population comparisons (below diagonal) for *Bucephalus minimus* without Merja Zerga and Celtic Sea samples, based on partial cytochrome c oxidase 1 sequences. Values in bold are significantly different from 0 after Bonferroni correction (corrected *P*-level 0.0167). *P*-values are above diagonal.

	Wadden Sea	English Channel	Arcachon Bay
Wadden Sea	-	0.49886	0.00079
English Channel	-0.00130	-	0.02604
Arcachon Bay	0.07916	0.04671	-