

Fig. S1: Mean luminal radius to mean epithelial thickness (MLR/MET) in digestive gland of mussels sampled in Galician Coast from April 2003 to April 2006. Histograms include statistics for comparison among sampling years and localities for each sampling month (April, July and September/October). Vertical segments represent standard deviations. Asterisks in triangular matrices indicate significant differences (p<0.05) between pairs of localities within each sampling time according to Duncan's test performed after one-way ANOVA. For each locality, each colour (grey, yellow or blue) in the histogram bars corresponds to a subgroup significantly different (p<0.05) among years for each sampling month, according to Duncan's test performed after one-way ANOVA.



Fig. S2: Mean luminal radius to mean epithelial thickness (MLR/MET) in digestive gland of mussels sampled in Cantabrian Coast from April 2003 to April 2006. Histograms include statistics for comparison among sampling years and localities for each sampling month (April, July and September/October). Vertical segments represent standard deviations. Asterisks in triangular matrices indicate significant differences (p<0.05) between pairs of localities within each sampling time according to Duncan's test performed after one-way ANOVA. For each locality, each colour (grey, yellow or blue) in the histogram bars corresponds to a subgroup significantly different (p<0.05) among years for each sampling month, according to Duncan's test performed after one-way ANOVA.



Fig. S3: Mean luminal radius to mean epithelial thickness (MLR/MET) in digestive gland of mussels sampled in Basque Coast from April 2003 to April 2006. Histograms include statistics for comparison among sampling years and localities for each sampling month (April, July and September/October). Vertical segments represent standard deviations. Asterisks in triangular matrices indicate significant differences (p<0.05) between pairs of localities within each sampling time according to Duncan's test performed after one-way ANOVA. For each locality, each colour (grey, yellow or blue) in the histogram bars corresponds to a subgroup significantly different (p<0.05) among years for each sampling month, according to Duncan's test performed after one-way ANOVA.



Fig. S4: Spatial and temporal trends in cumulative inflammatory responses (granulocytomas, hemocytic infiltrations and brown cell aggregates) in digestive gland tissue of mussels sampled in 22 localities along the Northern Iberian Peninsula (2003-2006). A: April; J: July; S; September; O: October.



Fig. S5: Spatial and temporal trends in cumulative infection intensity (unidentified eosinophilic bodies, *Marteilia refringens*, metacercaria, sporocyst, R/CLO, intracellular ciliates, *Mytilicola intestinalis* and *Nematopsis* sp.) in digestive gland tissue of mussels sampled in 22 localities along the Northern Iberian Peninsula (2003-2006). A: April; J: July; S; September; O: October.