List of supplementary tables and figures:

Supplementary table 1: Metatranscriptomic samples metadata Supplementary table 2: Gene annotations Supplementary table 3: Read counts for the 25140 expressed P. australis genes Supplementary table 4: Broad functions and related over-represented GO categories. Supplementary table 5: Homology and expression levels (log2FC) in vitro (P. multistriata) and in situ (P. australis) of genes belonging to clusters 1, 3, 4 and 6. In vitro results from [17]. Supplementary table 6: functions over-represented in genes belonging to cluster 1 but down-regulated in vitro. Supplementary table 7: functions over-represented in genes belonging to cluster 3 and 4 but up-regulated in vitro. Supplementary figure 1: Map indicating the position of the sampling site in Western Europe. Supplementary figure 2: Temporal evolution of the mean chlorophyll fluorescence per day between 2017-02-01 and 2017-05-30. The survey period is shown in black. Supplementary figure 3: A. Relative abundances of the Arthropod's phylum community composition and B. Maxillopoda (copepods) phylum species community composition during

- 27 the 2017 monitoring (the category others regroup phylum and species lower than 2% of total
- 28 abundance)
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