The following supplement accompanies the article

Synergistic effects of seasonal deoxygenation and temperature truncate copepod vertical migration and distribution

James J. Pierson*, Wen-Cheng L. Slater, David Elliott, Michael R. Roman

*Corresponding author: jpierson@umces.edu

Marine Ecology Progress Series 575: 57–68 (2017)

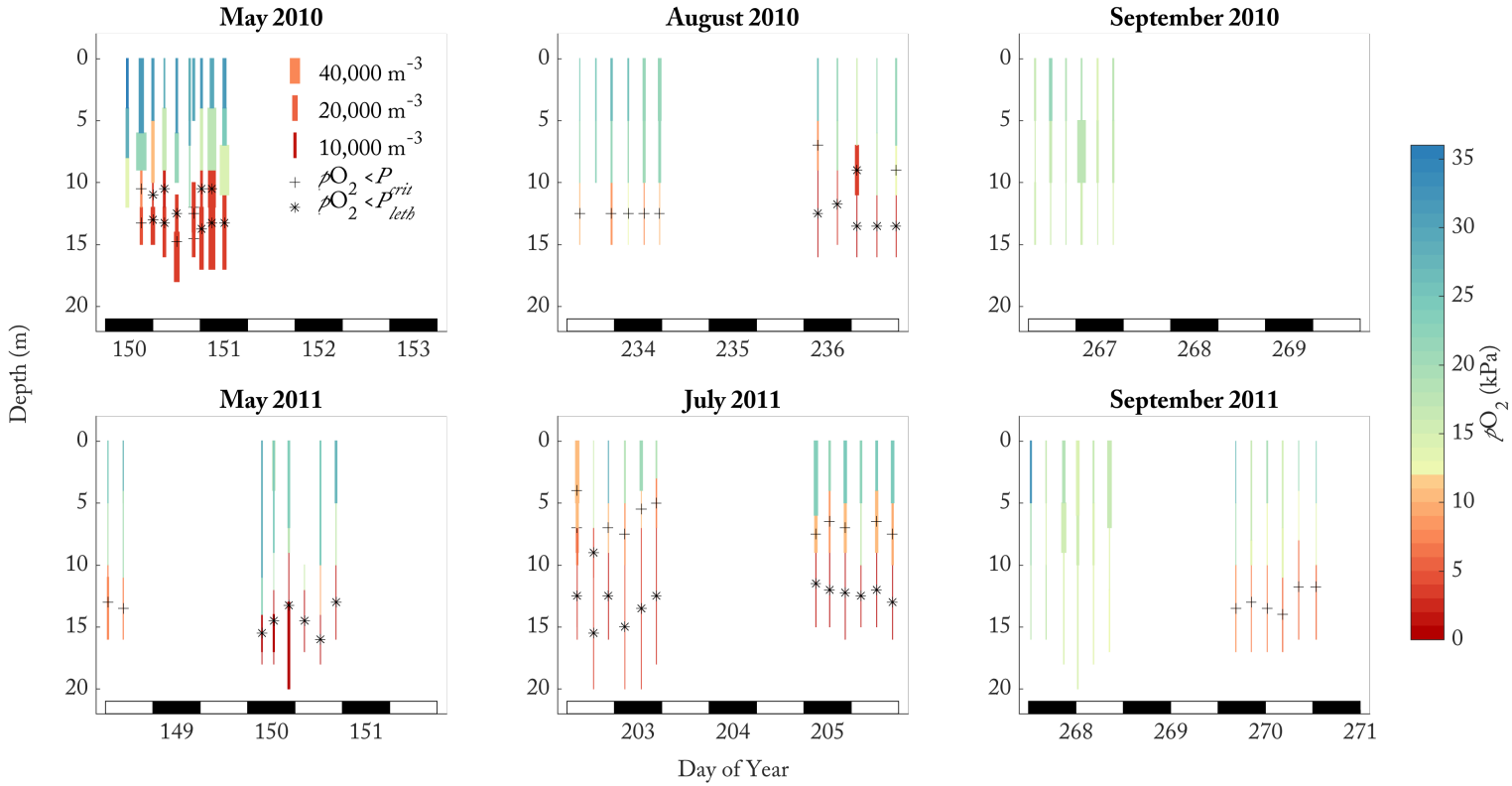

Figure S1. Vertical distribution of *A. tonsa* copepodites and adults from each MOCNESS tow over time for each cruise, with colors showing mean dissolved oxygen partial pressure recorded during each net. Width of each box shows total concentration of *A. tonsa* copepodites and adults (m^{-3}), height of each box shows the depth interval sampled by each net. Boxes are centered on the mean time of each MOCNESS tow. Colors represent dissolved oxygen partial pressure (kPa), plus (+) symbols show when $pO_2 < P_{crit}$, and star (*) symbols show tows where $pO_2 > P_{leth}$. Black bars at the bottom of each panel show periods of night time, white bars show periods of daytime. Data from 2010 and 2011 are in the upper and lower panels, respectively. Spring, summer, and autumn data are shown in left, middle, and right panels, respectively.

Table S1. Regression Tree results. All tress created with leaf size, n=12 in Matlab, using the "fitrtree.m" function.

Fraction Above Pycnocline, Copepodites	
1	if pO2<2.01535 then node 2 elseif pO2>=2.01535 then node 3 else 0.463404
2	fit = 0.673048
3	if T<23.7562 then node 4 elseif T>=23.7562 then node 5 else 0.358582
4	if pO2<6.90029 then node 6 elseif pO2>=6.90029 then node 7 else 0.285753
5	fit = 0.516378
6	fit = 0.218189
7	fit = 0.343666
Fraction Above Pycnocline, Females	
1	if pO2<2.01535 then node 2 elseif pO2>=2.01535 then node 3 else 0.582981
2	fit = 0.769727
3	if pO2<6.23782 then node 4 elseif pO2>=6.23782 then node 5 else 0.489609
4	fit = 0.380902
5	if T<23.4448 then node 6 elseif T>=23.4448 then node 7 else 0.539781
6	fit = 0.586426
7	fit = 0.485361
Fraction Above Pycnocline, Males	
1	if pO2<1.20616 then node 2 elseif pO2>=1.20616 then node 3 else 0.465522
2	fit = 0.648676
3	if T<23.7617 then node 4 elseif T>=23.7617 then node 5 else 0.394047
4	if pO2<6.90029 then node 6 elseif pO2>=6.90029 then node 7 else 0.309195
5	fit = 0.557691
6	fit = 0.236009
7	fit = 0.367743
Fraction Below Pycnocline, Copepodites	
1	if pO2<2.01535 then node 2 elseif pO2>=2.01535 then node 3 else 0.172202
2	fit = 0.00945216
3	if T<23.6943 then node 4 elseif T>=23.6943 then node 5 else 0.249508
4	if T<22.9085 then node 6 elseif T>=22.9085 then node 7 else 0.332031
5	fit = 0.11197
6	fit = 0.280621
7	fit = 0.387726
Fraction Below Pycnocline, Females	
1	if pO2<2.01535 then node 2 elseif pO2>=2.01535 then node 3 else 0.140722
2	fit = 0.00708672
3	if T<23.1246 then node 4 elseif T>=23.1246 then node 5 else 0.204199
4	fit = 0.253534
5	fit = 0.1439
Fraction Below Pycnocline, Males	
1	if T<23.6943 then node 2 elseif T>=23.6943 then node 3 else 0.173073
2	if pO2<4.85228 then node 4 elseif pO2>=4.85228 then node 5 else 0.28379
3	if pO2<2.80492 then node 6 elseif pO2>=2.80492 then node 7 else 0.0504927
4	fit = 0.123786
5	fit = 0.415559
6	fit = 0.0100943
7	fit = 0.0908912