

Appendix from M. L. Groner et al., “Rising Temperatures, Molting Phenology, and Epizootic Shell Disease in the American Lobster” (Am. Nat., vol. 192, no. 5, p. E163)

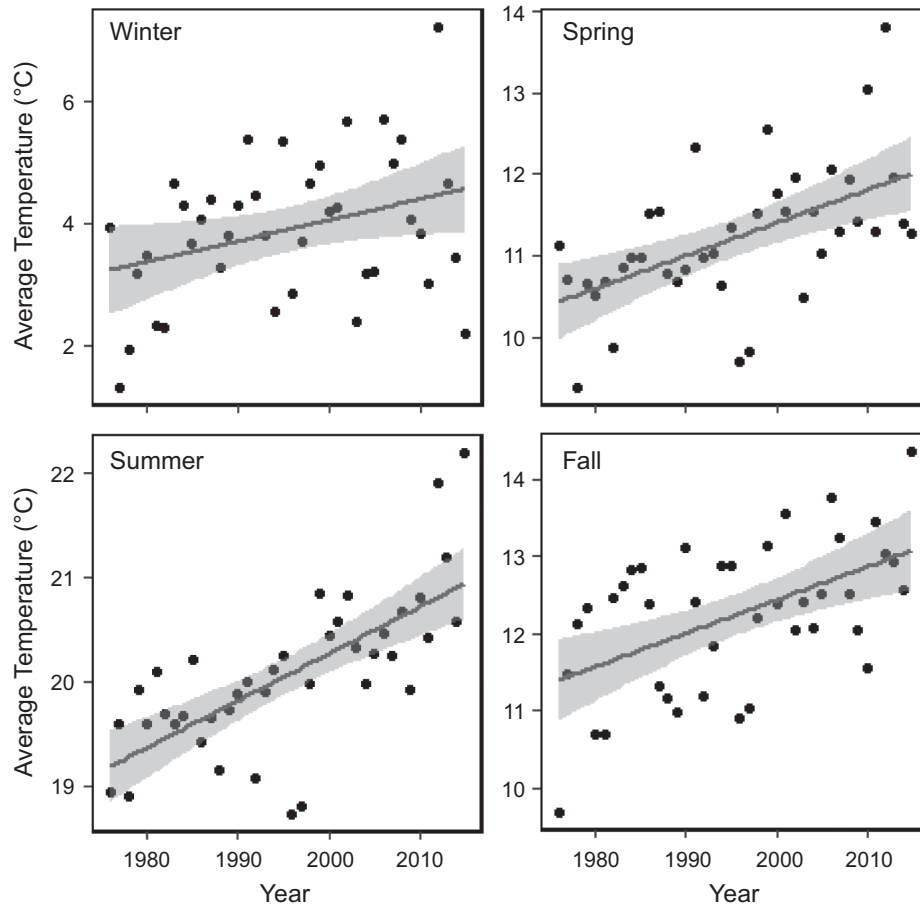


Figure A1: Average seasonal bottom temperatures (°C) in Niantic Bay, Connecticut, from 1976 through 2015. Seasonal average temperatures are increasing significantly at a rate of 0.34°–0.45°C per decade. Note change in Y-axis among graphs. Shading indicates 95% confidence intervals on linear regressions.

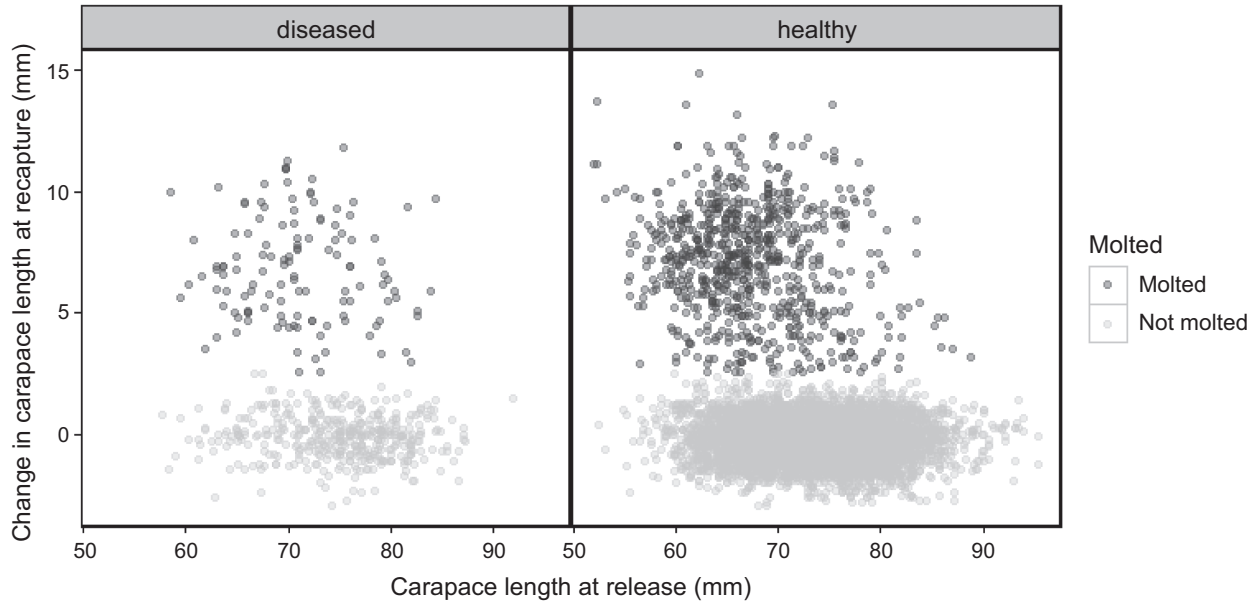


Figure A2: Change in carapace length at recapture (relative to release) as a function of size. Lobsters that molted were considered to have a change >2.5 mm. Negative changes in carapace length were likely due to measurement error (usually <2.5 mm).

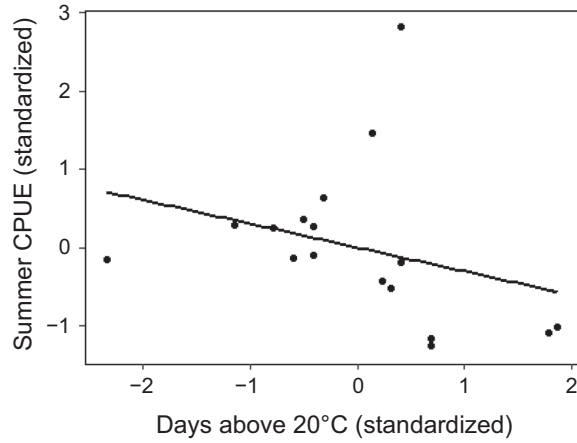


Figure A3: Relationship between summer temperature (number of days exceeding 20°C) and summer catch per unit effort (CPUE) in Niantic Bay between 1999 and 2015.

Table A1: Full and conditional averaged models of September and October prevalence of epizootic shell disease (ESD) in juveniles and adult males

	Full				Conditional			
	Estimate	Adjusted SE	<i>z</i>	<i>P</i>	Estimate	Adjusted SE	<i>z</i>	<i>P</i>
September:								
Intercept	22.69	2.47	9.2	<.0001	22.69	2.47	9.2	<.0001
Hot days	1.64	2.01	.8	.42	3.01	1.83	1.6	.10
May molting	4.03	1.78	2.3	.02	4.03	1.78	2.3	.02
Life stage	13.05	3.49	3.7	<.0005	13.05	3.49	3.7	<.0005
Summer CPUE	-1.34	1.88	.7	.48	-2.77	1.83	1.5	.13
October:								
Intercept	54.43	3.39	16.1	<.0001	54.43	3.39	16.1	<.0001
Hot days	6.58	2.40	2.7	.006	6.58	2.40	2.7	.006
May molting	-1.83	2.47	.7	.46	-3.63	2.36	1.5	.12
Life stage	4.60	5.09	.9	.37	7.70	4.41	1.7	.08
Summer CPUE	1.65	2.31	.7	.48	3.39	2.26	1.5	.13

Note: CPUE = catch per unit effort.